1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

481 Examples of Seri fleetness and endurance might be multiplied indefinitely, and many of still more striking character might be adduced; but these instances, all attested by several witnesses, all corroborated by independent facts, and all consistent with the observations of the 1894 expedition, seem fairly to represent one aspect of the pedestrian habit of the tribe.

●412 A trait of the Seri hardly less conspicuous than their pedestrian habit is habitual use of hands and teeth in lieu of the implements characteristic of even the lowly culture found among most primitive tribes. Perhaps the most nearly universal implement is the knife—at first of shell, tooth, bone, or wood, later of stone, and last of metal—and hardly a primitive tribe known from direct observation or from relics has been found independent of this most serviceable implement; yet the Seri may be described with reasonable accuracy as a knifeless folk. Awls and marlinspikes of bone and wood, shell cups, and pro-
[172] tolithic mullers or hammers are found in numbers in their hands, on their rancheria sites, and in their ancient shell accumulations, while rudely chipped stone arrowp ints are sparsely scattered over their range; yet not a single knife of stone or other wrought substance has
[439] been found in their territory or in their possession, save for an occasional metal knife obtained by theft or barter. And the habit of dispensing with this primary implement is attested both by everyday customs and by the traditions and chronicles concerning the tribe. Thus, various observers (notably Hardy) have recorded the features and uses of balsas, harpoons, ollas, etc, yet no records of cutting implements have been found; similarly the chronicles contain records of
[439] barter between the Seri and the Sonorenses through which the savages acquired aguardiente, mantas, garments, sugar, grain, etc, yet no record is known of the leading articles of exchange to practically all other tribes of the continent, viz, cutlery; and in like manner the local traditions recount the constant desire of the Seri for liquor and tobacco, saccharine and other food substances, clothing or material for making it, tin cups, lard-cans, and other metallic utensils, as well as nails for harpoons and hoop-iron for arrowpoints, in addition to firearms and ammunition; yet the recounters are significantly silent on the subject of knives.

Conformably, the 60 Seri gathered near Costa Rica in 1894 made it their business to pick up or beg all sorts of industrial products and materials, yet apparently did not possess so many as a dozen knives in the entire band; and while protolithic implements, ollas, shell cups, paint-stones, etc., were seen in constant use, none of the men, women, or children were observed to use knives for cutting meat or for
264 any other customary purpose. Among the supplies laid on top of the jacal shown in plate X, to keep them out of the way of the dogs, was a hind leg of a horse, from femur to hoof (some three days dead and still

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

ripening); most of the larger muscles were already gnawed away, leaving loose ends of fiber and strings of tendon clinging to the bone, the condition being such that the remaining flesh might easily have been cut and scraped away by means of a knife; yet whenever a warrior or woman or youth hungered he or she took down the heavy joint, squatted or sat on the ground with back to one side of the doorway, held the mass at the height of the mouth, and gnawed, sucked, and swallowed, frequently tearing the tissue by twisting and backward jerks of the head, and not only masticating, but swallowing the free ends of tendons still attached to the bone. This process was varied only by seizing with the hands and tearing off a strip of flesh or skin already loosened by the teeth; and it was continued until the bones were practically clean, when they were wrenched apart by the stronger men in order that the cartilaginous cushions and epiphyses might be gnawed away. The only approach to cooking or carving was a parboiling of the foot, after the leg was wrenched off at the hock, until the hoof was sufficiently softened to be knocked off with the protolithic hupf[1] shown in plate XLIII, when half a dozen matrons and well-grown maidens gathered about to gnaw the gelatinous tissue (already softened by incipient decay as well as by the parboiling) investing the coffin bone. The entire procedure in this as in many other cases proclaimed the absence of knife-sense. The Caucasian huntsman does not have to think of his knife when game is to be bled or skinned or dissected; his habit-trained hand knows where to find the implement, how to seize it, and in most cases how to wield it advantageously; but the Seri hand possesses no such cunning, and uses the knife only clumsily and at second thought, if at all. The Seri huntsman, on the other hand, does not have to think of nails and teeth, for they are trained and coordinated by hereditary habit to spontaneously act in unison and with the utmost possible or needful vigor; while the Caucasian at least has completely lost the claw-and-teeth instinct of offense and defense.

Conformably with their striking independence of knives, the Seri are conspicuously unskilful in all mechanical operations involving the use of tools. Their most elaborate manufacture is the balsa, made from reeds broken at the butts and with the leaves and tops removed by the hands or by fire, bound together with hand-made cords; next in elaborateness come the bow and arrow, normally made without cutting tools; then follows their fictile ware, which is made wholly by hand, without aid of the simple molds and paddles and other devices used by neighboring tribes; while their primitive fabrics were apparently of hand-extracted fibers, twisted and woven wholly by hand, with the aid of wood or bone perforators in sewing and possibly in weaving. Practically the Seri possess but a single tool, and this is applied to a peculiarly wide variety of purposes—it is the originally natural cobble used for crushing bones and severing tendons, for grinding seeds and

[1] Defined postea, p. 180.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 rubbing face-paint, for bruising woody tissue to aid in breaking okatilla poles for house-frames or mesquite roots for harpoons (both afterward finished by firing), and on occasion for weapons; and this many-functioned tool is initially but a wave-worn pebble, is artificially shaped only by the wear of use, and is incontinently discarded when sharp edges are produced by use or fortuitous fracture. The hupf is supplemented chiefly by the simple perforator of mandible or bone or fire-hardened wood; and these two primitive implements, together with molluscan shells in natural condition, apparently serve as the primary tools for all the mechanical operations of the tribe.

726 The dearth of tools and the absence not only of knives but of knife-sense among the Seri illumine those traditions of Seri fighting made tangible by the teeth-torn arm of Jesus Omada; for they explain the alleged recourse of the Seri warriors to nature's weapons, used in the centripetal fashion characteristic of nascent intelligence.

186 The Seri are distinguished by another trait hardly less striking than the pedestrian habit, and even more conspicuous than the tooth-and-nail habit with the correlative absence of tool-sense; the trait is not tangible enough for ready definition or description in terms (of course because so unusual as not to have bred words for its expression), but is akin to—or, more properly, an exceeding intensification of—race-pride in all its protean manifestations; it may be called *race-sense*. Like other primitive folk, the Seri are self-centered (or egocentric) in individual thought, i. e., they habitually think of the extraneous phenomena of their little universe with reference to self, as in the labyrinth of consanguineal relationship extending and ramifying from the speaker; furthermore, they typify primitive culture in their collective thinking, which is tribe-centered (or ethnocentric), i. e., they view extraneous things, especially those of animate nature, with reference to the tribe, like all those lowly folk who denote themselves by the most dignified terms in their vocabulary and designate aliens by opprobrious epithets; but the Seri outpass most, if not all, other tribes in dignifying themselves and derogating contemporary aliens. Concordantly with this habitual sentiment, they glory in their strength and swiftness, and are inordinately proud of their fine figures and excessively vain of their luxuriant locks—indeed, they seem to exalt their own bodies and their own kind well toward, if not beyond, the verge of inchoate deification. The obverse of the same sentiment appears in the hereditary hate and horror of aliens attested by their history, by their persistent blood-thirst, and by the rigorous marriage regulations adapted to the maintenance of tribal purity; for just as their highest virtue is the shedding of alien blood, so is their blackest crime the transmission of their own blood into alien channels. The potency of the sentiment is established by the unparalleled isolation of the tribe after centuries of contact with Caucasians, by their irreducible love of native soil, by their implacable animosity toward invaders, and by

[826]

186 609

[648]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

386 prepared by trituration with a pebble or rubbing with the fingers, usually in a shell cup. Sometimes the shell used for the purpose is the [412] valve of a *Cardium*, which serves indiscriminately as cup, spoon, skin-scraper, etc; but preference is apparently given to thick and strong shells, such as the wave-worn valve of *Chama* (?), shown in plate XXVII, figure 7, which are consecrated to the use and eventually buried [764] with the user, together with a supply of the paint (like that illustrated in the cane cylinder—figure 4—which was a mortuary sacrifice). The gypsum is usually carried in natural slabs or other fragments, perhaps rounded by wear (plate XXVII, figures 6 and 8); it is prepared by wetting and rubbing two pieces together, the larger being reduced to metate shape by the operation. The dumortierite was observed only in the form of a pencil made by pulverizing the substance and mixing with sufficient clay to give consistency. The several pigments are 302 applied wet by means of human-hair brushes kept for the purpose, the process occupying from half an hour to three or four hours for the more elaborate designs. So far as observed at Costa Rica in 1894, the paints were mixed in water only; but since painting outfits found on [386] Tiburon island in 1895 were smeared with grease, it is probable that either water or fats may serve for menstrua, at the convenience of the artists. Commonly the process of painting is measurably cooperative. The matron usually depicts her device on the faces of her daughters [593] up to the age of 12 or 15 years, when they learn to make the applications themselves; and frequently two or more women (usually those [476] with similar devices) work together in preparing and applying the pigments, each laying the paint on her own face and apparently guiding her hand partly by the sense of feeling and partly by suggestions from her coworkers; but Candelaria and some other of the younger women at Costa Rica frequently worked alone, aided by a mirror in the form of a shallow bowl of water set in the shadow while the brilliant desert glare fell full on the face.

317 The mines yielding the pigments were not located. The geologic conditions are such that the ochers are undoubtedly abundant; but it is probable that the gypsum is uncommon and confined to a remote locality or two, and that the dumortierite is rare and scanty here as elsewhere. The care with which the paints are preserved, prepared, and 386 applied, the fact that they are indispensable feminine appurtenances 435 even on the longest journeys, and their sacred rôle in the mortuary customs, all combine to indicate that they are among the most highly prized possessions of the people and by far the most precious of their minerals.

The sematic functions of the designs are esoteric, yet an inkling of 302 their meaning was obtained through Mashém, the interpreter at Costa 614 Rica in 1894; from his expressions it appears that the designs are sacred insignia of totemic character, serving to denote the clans of which the tribe is composed. But three clans were identified, and

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225 the turtle is either drowned or driven ashore, or else lifted on the craft.[1] Immediately on landing the quarry, the plastron is broken loose by
264 blows of the hapf[2] and torn off by vigorous wrenches of the warriors and their strong-taloned spouses in the impetuous fury of a fierce blood-craze like that of carnivorous beasts; the blood and entrails and all soft parts are at once devoured, and the firmer flesh follows at a rate depending on the antecedent hunger, both men and women crushing integument and tendon and bone with the hapf, tearing other tissues with teeth and nails, mouthing shreds from the shell, and gorging the whole ravenously if well ahungered, but stopping to singe and smoke or even half roast the larger pieces if nearer satiety.
[251] If the quarry is too large for immediate consumption and not too far from a rancheria the remnants (including head and flippers and shells) are hoisted to the top of the jacal immediately over the open end—the conventional Seri larder—to soften in the sun for hours or days; and on these tough and gamey tidbits the home-stayers, especially the youths, chew luxuriously whenever other occupations fail. In times of plenty, such sun-ripened fragments of rusking feasts are rather generally appropriated first to the children and afterward to the coyote-dogs; and it is a favorite pastime of the toddlers to gather about an inverted carapace on hands and knees, crowding their heads into its noisome depths, displacing the rare scavenger beetles and blowflies of this arid province, mumbling at the cartilaginous processes, and sucking and swallowing again and again the tendonous strings from the muscular attachments, until, overcome by fulness and rank effluvia, they fall asleep with their heads in the trough—to be stealthily nudged aside by the cringing curs attached to the rancheria. Com-

[1] A lively and explicit account of Seri turtle-fishing appears in Hardy's Travels in the Interior of Mexico, 1825, pp. 396-397: "Bruja's bay is of considerable extent, and there are from five to three fathoms water close to Arenal's island, in the neighborhood of which the Indians catch abundance of turtle in a singular manner. I have already described their canoes, which in Spanish are called 'balsas'. An Indian paddles himself from the shore on one of these by means of a long, slender pole of about 12 or 14 feet in length, the wood of which is the root of a thorn (*Mimosa*) mesquite, growing near the coast; and although the branches of this tree are extremely brittle, the underground roots are as pliable as whalebone and nearly as dark in color. At one end of this pole there is a hole an inch deep, into which is inserted another bit of wood, in shape like an oar, having a square bit of iron 4 inches long fastened to it, the other end of the iron being pointed. Both the half and cup are first moistened and then tightly inserted one within the other. Fastened to the iron is a cord of very considerable length, which is brought up along the pole, and both are held in the left hand of the Indian. So securely is the nail thus fixed in the pole that although the latter is used as a paddle it does not fall out.

225 "A turtle is a very lethargic animal, and may frequently be surprised in its watery slumbers. The balsa is placed nearly perpendicularly over one of these unsuspecting sleepers, when the fisherman, softly sliding the pole through the water in the direction of the animal till within a foot or two of it, he suddenly plunges the iron into its back. So sooner does the creature feel itself wounded than it swims hastily forward and endeavors to liberate itself. The slightest motion of the turtle displaces the iron point from the long pole, which would otherwise be inevitably broken and the turtle would as certainly be lost; but in the manner here described it is held by the cord fastened on to the iron which has penetrated its back till, after it has sufficiently exhausted its strength, it is hauled on board the canoe by the fisherman, who proceeds to the shore in order to dispose of his prize."

[410] [2] The universal stone implement of the Seri, improvised from a cobblestone and used in nearly every industrial occupation (see index, p. 256); the designation is seriatic, or commonpoetic, from the sound of the stroke, particularly on animal tissues.

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vivacity awakened in the Seri bystanders by their spokesman's frequent interlocutions with them during the recital. Unfortunately the account was not clear as to the seasons selected, though the expressions indicated that the feasts are fixed for times at which the young are fully fledged. It would seem inconceivable that the Seri, with their insatiate appetite for eggs and tender young, should consciously respect a breeding time or establish a closed season to perpetuate any game; yet it is probable that the pelican is somehow protected in such wise that it is not only not exterminated or exiled, but actually fostered and cultivated. It is certain that the mythical Ancient of Pelicans is the chief creative deity of Seri legend, and its living representative the chief tutelary of one of the clans; it is certain, too, that this doubly fowl, sluggish and defenseless as it is on its sleeping grounds, would be the easiest source of Seri food if it were hunted indiscriminately; and it is no less certain that the omnivorous tribesmen would quickly extinguish the local stock if they were to make its kind, including eggs and young, their chief diet; yet it survives in literal thousands to patrol the waters of all Seriland in far-stretching files and vees seldom out of sight in suitable weather. On the whole, it would seem evident that an interadjustment has grown up between the tribesmen and their fish-eating tutelary during the centuries, whereby the fowl is protected, albeit subconsciously only, during the breeding seasons; and in view of other characteristics of the tribe it would seem equally evident that the protection is in some way effected by means of ceremonies and tabus. 223 [776]

Somewhat analogous, though apparently less ceremonial, expeditions are made to Isla l'atos and other points in search of ducks, and to Isla San Esteban, and still more distant islands in search of eggs (preferably near the hatching point) and nestlings; while the abundant waterfowl of the region are sought in Rada Ballena and other sheltered bays, as well as in such landlocked lagoons as those of l'unta Miguel and Punta Arena. This hunting involves the use of bows and arrows, though the archery of the tribe pertains rather to the chase of larger land game, and apparently attains its highest development in connection with warfare. No specialized fowling devices have been observed among the Seri; and their autonomous recitals, the facies of their artifacts, and the observed habits of the tribe (especially the youth) with respect to birds, all indicate that ordinary fowling holds a subordinate place in Seri craft—i. e., that it is a fortuitous and emergency avocation, rather than an organized art like turtle-fishing and water-carrying. Concordantly, culinary processes are not normally employed in connection with waterfowl, and the customary implements used for incising the skin and severing other tissues are the shell-cup, which is carried habitually for other purposes, the cane-splint, which appears to be improvised on occasion and never carried habitually, and the ubiquitous hupf. [222] [411] [412]

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177 224 knives in severing the tough integuments and tendons of horses and kine, although the tendency has not yet resulted (as elsewhere noted, ante, pp. 152–154) in the development of a knife-sense; and although boys on the frontier play at roping dogs, no effort to use the riata or any form of rope is made in the actual chase. As naively explained by Mashém amid approving grunts from his clan-mates, they have no time for ropes or knives when hungry.

262 A quantitatively unimportant yet by no means negligible fraction of the normal diet of Seriland is vegetal; and while the sources of vegetal food are many and diverse, the chief constituent is a single product characteristic of American deserts, viz, the tuna, or prickly pear.

222 All of the cacti of the region yield tunas in considerable quantity. The pitahaya is perhaps the most abundant producer, and its name is often given to the fruit; the huge saguaro affords an enormous annual yield, and the still more gigantic saguesa is even more prolific, especially in its immense forests along the eastern base of Sierra Seri; the cina adds materially to the aggregate product, while the nopal, or common prickly pear, contributes a quota acquiring importance from the facility with which it may be harvested. The fruits of all these cacti are sometimes classed as sweet tunas, in contradistinction from the sour tunas yielded in great abundance by the cholla and consumed with avidity by stock, though seldom eaten by men. The edible tunas average about the size of lemons, and resemble figs save that their skin is beset with prickles. The portion eaten is a luscious pulp, filled with minute seeds like those of the fig save that they are too hard for mastication or digestion, its flavor ranging from the sickly sweet of the overcultivated fig to a pleasant acidity. While occasional tunas may be found at any time during the year, the normal harvest occurs about midsummer, or shortly before the July-August humid season, and lasts for several weeks. During the height of the season the clans withdraw from the coast and give undivided attention to the collection and consumption of the fruits, gorging them in such quantities that, according to the testimony of the vaqueros, they are fattened beyond recognition. Commonly the tunas are eaten just as they are gathered, and the families and larger bands move about from pitahaya to pitahaya and from valley to valley in a slovenly chase of this natural harvest, until waning supply and cloying appetite drive them back to the severer chase of turtle and pelican. The fruit is not cooked, and never preserved save in the noisome way of nature, and is rarely transported in quantities or over distances of industrial importance; yet the product may have some connection with the basketry of the tribe. The devices for collecting the fruits, especially from the lofty saguaro and saguesa, are mere improvisations of harpoon shafts, palobianco branches, or chance cane-stalks carried primarily for arrow-making or balsa construction.

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There is no such well-studied and semiceremonial apparatus for tuna gathering as, for example, the Papago device made from the ribs of the dead saguaro in accordance with traditional formula. 222 [412]

Perhaps second in importance among the vegetal constituents of Seri diet is the mesquite bean, which is gathered in random fashion whenever a well-loaded tree is found and other conditions favor. The woody beans and still woodier pods are roughly pulverized by pounding with the hupf on any convenient stone used as an ahst (metate or mortar), or, if suitable stones are not at hand, they are carried in baskets or improvised bags to the nearest shore or other place at which stones may be found. The half-ground grist is winnowed in the ordinary way of tossing in a basket; and the grinding and winnowing continue alternately until a fairly uniform bean meal is obtained. So far as was actually observed this is eaten raw, either dry in small pinches or, more commonly, stirred in water to form a thin atole; but expressions at Costa Rica indicated that the meal is sometimes stirred in boiling water or pot-liquor, and thus partially cooked, in times of rest and plenty. [262] 252

Other vegetal products used as food comprise a variety of seeds collected from sedges and grasses growing about the mud-flats of Laguna La Cruz and other portions of the province, as well as the seeds and nuts of the scant shrubbery of shores and mountains; while a local seaweed or kelp is eaten in small quantity, apparently as a condiment, and is sometimes carried on journeys even as far as Costa Rica, where specimens were obtained in 1894. 262

It is of interest to note that one of the most distinctive constituents of the Sonoran flora, and one intimately connected with human life in the great neighboring province of Papagueria, is of negligible rarity in Seriland; this is the visnaga (*Echinocactus*, probably of two or three species), the thorniest of the cacti and the only one containing consumable pulp and sap. This peculiar plant is of no small interest in itself as a striking example of the inverse relation between protective devices of chemical sort (culminating in acrid, offensive, or toxic juices) and the mechanical armaments so characteristic of desert plants;[1] it is of still deeper interest economically as the sole source of water over broad expanses of the desert, and one to which hundreds of pioneers and travelers have been indebted for their lives; and it is of interest, too, as a factor of Papago faith, in which the visnaga ranks among the richer guerdons of the rain gods. Throughout most of Papagueria this cactus is fairly abundant; usually there are several specimens to the square mile of suitable soil (it is not found in playas or on the ruggeder sierras), so that it is always within reach of the sagacious traveler; but it diminishes in abundance toward the borders of Seriland, and not more than a dozen examples were found in the portions of that province traversed by the 1895 expedition. Its rare occurrence, 137

[1] Cf. The Beginning of Agriculture, The American Anthropologist, vol. viii, Oct., 1895, pp. 350-376.

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of manufacture (only stray shreds of the interior cording could be found in an old and abandoned balsa on Punta Antigualla). As the bundle approaches the requisite size, the building process changes; the butts of the successively added stalks are thrust obliquely into the interstices extending beyond the butts of earlier-used canes, and the stems are slightly bent to bring them into parallelism with their fellows; and this interweaving process is continued with increasing care until, when the bundle is completed, there are no visible butts (all being pushed into the interior of the bundle), while the only visible tips are those projecting to form the tapering extremities. The finished bundle is then secured by a spiral winding of slender cord. Two other bundles are next made, the three being entirely similar, so far as is known; then the three are joined by a lashing of slender cord like that used for the separate bundles, which is twined alternately above and below the central bundle in such manner as to hold the three in an approximate plane save toward the extremities, where the lashing is much firmer and the tapering tips of the bundles are brought into a triangular position, i. e., the position of smallest compass. The cordage is of either mesquite root or maguey fiber, the former being the more common, so far as observed (doubtless by reason of the dearth of the latter plant); it is notably uniform in twist and size, though surprisingly slender for the purpose, barely three-sixteenths of an inch, or 5 mm., in diameter, and limited in quantity.[1] The only tools or implements used in the manufacture (and repair), so far as is known, are light wooden marlinspikes, two of which are illustrated in figure 28; these are used in working the cane-butts into the bundles. In collecting the canes the tassels are broken off and the leaves stripped by the unaided hands, while the stalks are broken off usually below the secondary roots in the downward taper, and the rootlets and loose ends are removed either with the hands or by fire.

The finished balsa is notably light and buoyant. The Boca Infierno specimen was estimated to weigh about 250 pounds (113 kilograms) when thoroughly dry, and little more than 300 pounds (126 kilograms)

FIG. 28—Seri marlinspikes.

[1] Only the finer cording shown in plate XXXI is original, the coarser ropes having been added to facilitate handling.

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291 [177] Of all the party at Costa Rica in 1894 subchief Mashém was the only one who wore Caucasian apparel with any air of comfort and fitness; yet even he, with hat and shirt, boots and breeches, and loose bandana about his neck in cowboy style (plate XVII), did not feel fully dressed without the slender hair-cord necklace of his kin in its wonted place. On the frontier improvised fig-leaves were sometimes put on the children of less than a dozen years (as illustrated by the standing infant shown in plate XIV, who was thus dressed hastily for her picture); and a common garb of the smaller children at Costa Rica, as they played about the rancheria or wandered in directions away from the white

[412] [854]

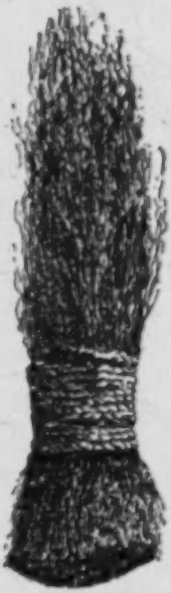

FIG. 29—Seri hairbrush.

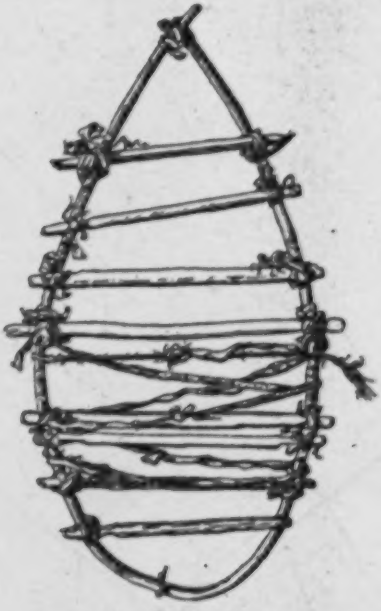

FIG. 30—Seri cradle.

man's rancho, was limited to a cincture of hair cord or snake skin, or perhaps of agave fiber, under which an improvised kilt might be tucked on the Caucasian's approach.

281 513 In addition to the individual apparel, each clan, or at least the elderwoman or her fraternal executive, accumulates some surplus material as opportunity offers, and this serves as family bedding until occasion arises for converting it to other uses. Of late the prevailing materials are pelican skins, lightly dressed and joined into robes by sinew stitching: deerskins, dried or partially dressed; cormorant skins, treated like those of the pelican; seal skins, usually fragmentary; peccary skins,

l: McGee E-5 (1894-1895)1898 NU31 Seri NU31

281 apparently dried without dressing, together with
513 skins of rabbits, mountain sheep, antelope, etc, usually tattered or torn into fragments. Commonly the hides and pelts are nearly or quite in natural condition, retaining the hair, fur, or feathers. The dressing is apparently limited to scratching and gnawing away superfluous flesh, followed by some rubbing and greasing; tanning is apparently unknown. By far the most abundant of the collective possessions are the pelican-skin robes, which form
[439] the sole article of recognized barter with aliens. The aggregate stock accumulated at any time is but meager, never too much to be borne on the heads and backs of the clan in case of unexpected decamping.

412 Aside from the painting paraphernalia, there is
302 but a single conspicuous toilet article; this is a hair-brush made of yucca fiber bound into cylindrical form, as illustrated in figure 29. This article is in frequent use; both women and men give much attention to brushing their own long and luxurious locks and cultivating the hair and scalps of their children, the process being regarded as not only directly useful but in some measure sacramental. Ordinarily the hair is parted in the middle and brushed straight, the tresses being permitted to wander at will and never braided or bound or restrained by fillets save in imitation of Caucasian customs on the frontier; though in certain ceremonies the pelage is gathered in a lofty knot on the top-head.[1]

854 The Seri cradle is merely a bow of paloblanco or other switch with rude cross-sticks lashed on, as shown in figure 30. On this is laid a small pelican-skin robe, with a quantity of pelican down for a diaper, and perhaps a few pelican feathers attached as plumes to wave over the occupant's face; though on the frontier these primitive devices are largely replaced by rags.

283 Among the important appurtenances of Seri life are the cords used for belts and necklaces, as well as for the attachment of ceremonial headdresses, for converting the kilts into bags, and for numberless minor purposes. The finest of these are made from human hair; and for this purpose the combings are carefully kept, twisted into strands, and wound on thorns or sticks in slender bobbins, such as that illustrated

FIG. 21.—Hair spindle.

[1] Cf. Hardy, Travels, p. 280.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

283 gualla by the 1895 expedition), and then hatcheled with the hupf or the edge of a shell; when the fibers are gathered in slender wisps or loosely wound coils, both of which were among the possessions of the Seri matrons at Costa Rica in 1894. So far as could be ascertained, the final processes parallel those of hair-cord making, i. e., the fibers are patiently sorted into strands, sized in the fingers and twisted by rolling on the thigh, the strands being subsequently combined in similar fashion.[1] Neither the weaving nor the woven fabrics of the Seri have ever been seen by technologic students so far as known, though the fabrics are shown in Von Bayer's photographs and have been described by various observers. According to Señor Encinas, they resemble coarse bagging, and are woven or netted quite plainly. The ordinary sewing material is sinew, used in connection with a bone awl (a good example of which is illustrated in figure 35), a fish

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[239]

FIG. 35.—Bone awl.

FIG. 36.—Wooden awls.

spine or bone, a cactus thorn, or either the mandible of a water-bird or a hard-wood skewer shaped after this natural needle (figure 36 *a* and *b*). Sometimes hair or vegetal fiber is substituted for the sinew; and for certain purposes an agave thorn, with the fibers naturally attached, serves for needle and thread.

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[1] A rope-twisting device of the sort commonly employed by southwestern Indians was found in use by boys in a village in Costa Rica in 1894, and was included in the Seri collection; but the indications were that the device was a mere toy used, like the bow-and-arrow, chiefly by the old only in youthful sports.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

activities; i. e., in developed industries the tool is a primary factor, while in nascent industries it is but a collateral.

The tools of any primitive tribe may be defined as appliances used primarily in the production of implements and utensils, and incidentally in preparing food, making habitations, manufacturing apparel, building vehicles or vessels, etc—in short, the appliances used in producing devices for the maintenance of active life. The definition emphasizes both the dearth and the undifferentiated character of Seri tools; for the appliances used in the production of devices are exceedingly few, and are commonly employed also in food-getting or in other vital industries.

Perhaps the most conspicuous general fact in connection with Seri tools and their uses is the prevalence of natural objects employed either (1) in ways suggested by natural functions or (2) in ways determined by the convenience of users; the former grading into artificial devices shaped in similitude of natural objects and employed in ways suggested by natural functions.

Prominent among the natural objects employed in natural ways are mandibles of birds, used in piercing pelts and fabrics; fish spines and bones, also used as piercers; thorns of cacti and mimosas, used in similar ways; teeth and horns of game animals, used in rending their own tissues, and afterward in miscellaneous industrial processes; together with cane splints, used for incising. Frequently the employment of such objects is mere improvisation; yet, so far as could be ascertained through direct observation at Costa Rica, through Mashém's incomplete accounts, and through inquiries from residents on the frontier, even the improvisations are made in accordance with regular custom firmly fixed by associations—quite in the way, indeed, of primitive life generally, and of the physiologic and psychic processes from which primitive custom is so largely borrowed. With these objects may be grouped the turtle-shells and pelican-pelts used as shields against alien and animal enemies or as protectors against the elements; and the Seri sages would class with them the deer-head masks and deer-hoof rattles worn in the dance to at once symbolize and invoke strength and swiftness. One of the most striking among the artificial devices of symbolic motive is the piercer, or awl, of wood or bone, shaped in imitation of the avian mandible; yet still more significant in a vestigial way (provided the most probable inference as to genesis be valid) is the hard-wood foreshaft of arrow and harpoon, shaped and used in trenchant symbolism of the deadly tooth.

There are two conspicuous classes of natural objects employed in ways determined largely by the convenience of the users, viz, (*a*) marine shells and (*b*) beach pebbles.

The marine shells applied industrially comprise the prevailing local genera, *Cardium*, *Mactra*, *Arca*, *Chama*, and others. They are used ordinarily as drinking-cups, dishes, dippers, receptacles for fats and face-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

237 412 [415] paints, and as small utensils generally; and they are used nearly as commonly for scraping skins, severing animal and plant tissues, digging graves and waterholes, propelling balsas, and especially for scraping reeds and sticks and okatilla stems in the manufacture of arrows, harpoons, bows, balsas, and jacal-frames—indeed, the seashell is the Seri familiar, the ever-present handmate and helper, the homologue of the Anglo-Saxon Jack with his hundred word-compounds, a half-personified reflex of habitual action and thought. Ordinarily—always, so far as is known—the shells are used in the natural state, i. e., either in the condition of capture and opening for the removal of the animal, or in the condition of finding on the beach. For certain purposes the fresh and sharp-edged shell is doubtless preferable, and for others the well-worn specimen (like the paint cup illustrated in plate XXVII) is chosen; but everything indicates that the need for smoothed shells is met by selecting wave-worn specimens, and nothing indicates that the value of the appliance is deemed to be enhanced by wear of use—in fact, the abundance of abandoned shells about the rancherias and camp sites, and over all Seriland for that matter, indicates that the objects are discarded as easily as they are found along the prolific shores.

412 Next to the shells, the most abundant industrial appliances of the Seri are beach pebbles or cobbles. They are used for crushing shell and bone, for rending the skins of larger animals, for severing tendons and splintering bones, as well as for grinding or crushing seeds, uprooting canes, chopping trees and branches, driving stakes, and for the multifarious minor purposes connected with the manufacture of arrows and balsas and jacales; they are also the favorite women's weapons in warfare and the chase, and are sometimes used in similar wise by the warriors. The material for these appliances paves half the shores of Seriland, and is available in shiploads; and its use not only illustrates Seri handicraft in several significant aspects, but illumines one of the more obscure stages in the technologic development of mankind.

The cobble-stone implements of the Seri range from pebbles to bowlders, and there is a corresponding range in function from light hand-implements at one end of the series to unwieldy anvils and metates at the other end. The intermediate sizes are not infrequently utilized, and are customarily used interchangeably, the smaller of any two used in conjunction serving as the hand implement and the larger as the anvil or metate; yet there is a fairly definite clustering of the objects about two types, a larger and more stationary class, and a smaller and more portable one.

192 412 The Seri designation for the larger stone implement is that applied to rock generally, viz, *ahst* (the vowel broad, as in "father"); and it seems probable that the term is onomatopoetic, or mimetic of the sound produced in the use of the implement as a metate, and that its application to rocks generally is secondary. The designation applied to the

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DOMESTIC ANVIL, SIDE

THE HOLLENTED PRINTING CO. BOSTON

[p. 234A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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DOMESTIC ANVIL, TOP

(p. 234 B)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412

DOMESTIC ANVIL, BOTTOM

THE HOLLISTON PRINTING CO., BOSTON

[1.234 c]

1: McGee F-5 (1894-1895)1898 NU31 Seri NU31

smaller implement is *hupf* or *hupf* (the initial sound explosive, combining the phonetic values of *h* and *k*; the vowel nearly as in "put", or like "oo" in "took"); the term is clearly an onomatope, imitating the sound of the blow delivered on flesh, on a mass of partially crushed mesquite beans, etc—indeed, both the word and the sound of the blow seem to connote food or eating, while regular pounding with the implement (either in ordinary use or by special design) is a gathering signal. So far as ascertained, the term is not extended to other objects save potential implements in the form of suitable pebbles; but it is significant that there is no distinction in speech—nor in thought, so far as could be ascertained—between the natural pebble and the wear-shaped implement.[1] The local terms ahst and hupf are explicit and specific, and without precise equivalents in other known tongues; moreover, the objects designated are too inchoate in development and hence too protean in function to be appropriately denoted by the designations of implements pertaining to more differentiated culture (mortar, metate, pestle, muller, mano, etc). Accordingly it seems desirable to retain the Seri designations.[2]

A typical specimen of intermediate size, used commonly as an ahst, but susceptible of employment as a hupf, is illustrated (natural size) in plates XXXV and XXXVI.[3] It is a hard, tough, hornblende granite or greenstone, with a few structure-lines brought out by weathering and wave-wearing. Its weight is 4 pounds 10 ounces (2.10 kilograms); its form and surface are entirely natural, save for slight battering shown on the two principal faces and still less conspicuous bruises along one edge (as imperfectly shown toward the left of plate XXXV). The specimen was found in a jacal (illustrated in plate VI) on Roda Ballena, within a few hours after abandonment, in the position in which it was hastily left by the last users; it was smeared with blood and fat (which still remain, as is shown in plate XXXV) and bits of flesh, and bore bloody finger prints of two sizes—those of a man and those of a woman or large child; beside it lay the hupf depicted in plate XLII. In its last use the unwieldly cobble served as an ahst, but the markings on the edge record use also as a hand implement.

A functionally similar implement is illustrated in plate XXXVII (on reduced scale; maximum length 8¼ inches = 210 cm.). It is of tough

[1] The failure to discriminate natural objects from artificialized implements produced from such objects by wear of use is a noteworthy trait of primitive folk. It is conspicuous among the more Indians of California, who fail to appreciate the manufacture of their own mills and who conceive that their hereditary mortars and stock pebble pestles, even when completely artificialized by a generation's use, are merely found and appropriated; and a similar state of mind prevails among the well-advanced Papago, who have no conception of making their well-finished mortars and pestles, or even the more inadequate occasionally surviving, but regard the implements as fruits of discovery or treasure-trove only.

[2] It should be noted that the terms used in the titles of the accompanying plates are not definitive, but merely descriptive.

[3] This, like the other illustrations of the native material (except plate LVI, which is a lithograph, partly process and partly hand-work), are photo-mechanical reproductions made directly from the objects; all are natural size unless otherwise specified.

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 but slightly vesicular and pulverulent volcanic tuff, pinkish-buff in color, and weighs 4 pounds 1 ounce (1.84 kilograms). The form and surface are almost wholly natural, save for slight battering about the larger end and severer battering, with the dislodgment of a flake, about the thinner end; yet the faces are smeared with blood and grease and flecked with turtle debris, and bear a few marks of hupf blows, as is shown in the reproduction. This specimen was found at a temporary camp of a small party on Punta Miguel, where it had been used in breaking up a turtle—the camp having been abandoned so precipitately that a considerable part of the quarry, with this hupf, the adze illustrated in plate LIV, the turtle-harpoon shown in figure 20, the half-made fire, and the fire-sticks used in kindling it, were left behind. The specimen is a good example of the cobbles carried into portions of the territory lacking the material (the camp at which it was found was on the great sandspit forming the eastern barrier of Boca Infierno, several miles from the nearest pebbly shore); it is of less specific gravity than the average rocks of the region, and looks still lighter by reason of its color and texture. Similar cobbles abound along the eastern coast of Tiburon, being derived from the immense volcanic masses of Sierra Kankaak.

About the more permanent rancherias and on many abandoned sites lie adzes usually too heavy for convenient transportation. In the habitable jacales such stones form regular household appurtenances, without which the menage is deemed incomplete; though the implement is commonly kicked about at random, often buried in debris (perhaps to be completely lost, and brought to light only by geologic changes, as demonstrated by the shell-heap of Punta Antigualla), and pressed into service only in case of need. An exceptionally well-worn specimen of the kind is illustrated in plate XXXVIII (scale one half linear; maximum width measured on base, 9½ inches = 23.5 cm.). The material is a hard, ferruginous, almost jasper quartzite, somewhat obscurely laminated. It weighs 10 pounds 11 ounces (4.85 kilograms). It is a natural slab, evidently from a talus rather than the shore, its native locus being probably the western slope of Sierra Seri. The edges and apex are formed by natural fracture; the most-used face (that shown in the plate) is a natural structure plane; the obverse side is partly a similar plane, partly irregular; while the base is an irregular fracture, evidently due to accident after the specimen had been long in use, though the fracture occurred years or decades ago, as indicated by the weathering of the surfaces. The entire face of the slab is worn and more or less polished by use as a metate, the wear culminating toward the center of the base (evidently the center of the original slab), where the hollowing reaches some three-sixteenths of an inch (5 mm.); yet even in the depths of the incipient basin the polished surface is broken by irregular pitting of a sort indicating occasional use as an anvil. The edges are quite uneven, but the smoother portion of the obverse is

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J: McGee E-5 (1894-1895)1898 NU31 Seri NU31

DOMESTIC ANVIL, REDUCED, TOP AND SIDE

(p. 336 A.)

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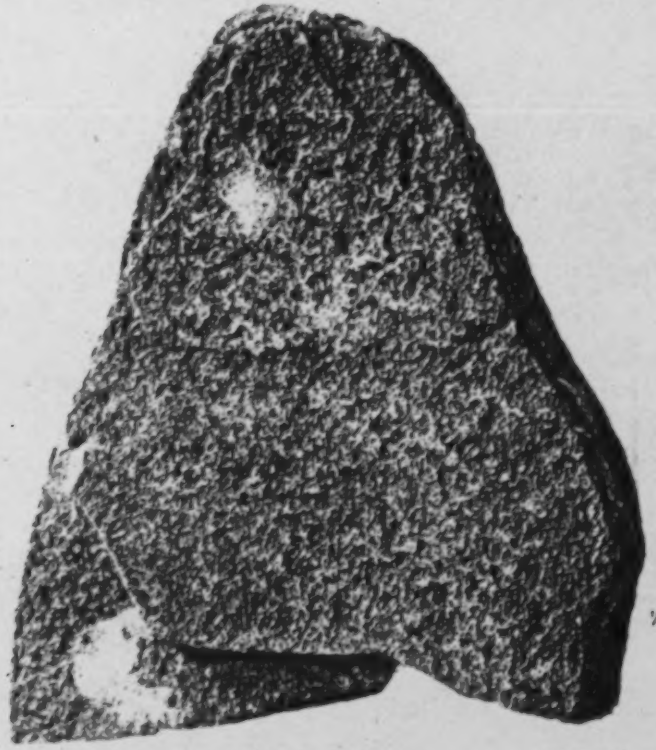

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METATE (REDUCED), EDGE AND TOP

THE HELIOTYPE PRINTING CO., BOSTON

[Pl. 37c.8]

1: McGee E-5 (1894-1895)1896 NU31 Seri NU31

1: McGee Z-5 (1894-1895)1898 NU31 Seri NU31

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worn and polished like the face, though to a less degree. The specimen was found at a recently occupied jacal, midway between Punta Astiguallo and Punta Ygnacio; it lay in the position of use, though half concealed by a cholla thrown over it, with the hupf shown in plate LVI; it was soaked with fat and smeared with the debris and intestinal contents of a turtle, as partly shown in the illustration.

The largest ahst seen in Seriland is illustrated in plates XXXIX and XL, on a scale of one-third linear (its maximum length being 15½ inches = 395 cm.); it is a dark, fine-grained silicious schist or quartzite, quite obscurely laminated; it weighs 33 pounds 8 ounces (15.20 kilograms). It is a natural slab, probably washed from a talus and slightly wave-worn; it might have come originally from either the southwestern flanks of Sierra Seri or the more southerly half of Sierra Kunkaak—certainly hundreds of similar slabs strew the eastern shore of Bahia Kunkaak, while the western shore, especially about Punta Narragansett, would yield thousands. Its artificial features (aside from miscellaneous battering) are limited to grinding of the two faces defined by structure planes. The principal face is abraded into an oblong or spoon-shape basin, about 8 inches (20 cm.) long, 5 inches (16 cm.) broad, and fully three-fourths of an inch (2 cm.) deep, the basin penetrating two or three laminæ of the slab in such wise as to produce the annular markings faintly shown in plate XXXIX; the obverse is slightly rubbed and ground and somewhat battered, like the face of the preceding specimen; and both sides are flecked with a fine but dark flour-like substance (doubtless derived from grinding mesquite beans, etc) forced into the texture of the stone by the grinding process. The entire slab is greasy and blood-stained, while battered spots about the edges and angles of the principal face record considerable use as an anvil for breaking up quarry—indeed, shreds of turtle flesh and bits of intestinal debris still lodge in some of the interstices. The specimen was taken from the old rancheria at the base of Punta Tormenta, where it had apparently been in desultory use for generations.

A sort of connecting link between ahst and hupf is afforded by elongate beach pebbles, such as that illustrated in plate XLI, which lay beside the large ahst last described, and which bears a few inconspicuous marks of use in slight battering at both ends, with a few shreds of turtle flesh about the blunter extremity (at the right on the plate). The specimen is shown natural size; it is of pinkish-gray trachyte(?), and weighs 1 pound 12 ounces (0.79 kilograms). It is noteworthy chiefly as an illustration of the Seri mode of seizing and using hand-implements (a mode repeatedly observed at Costa Rica in 1894); the pebble comfortably fits the Caucasian hand, held hammerwise; it is intuitively grasped in this way, and when so seized and used with an outward swing forms an effective implement for bone-crushing, etc, the natural striking-point being near the free end; but the centripetally moving Seri invariably seizes the specimen in such manner that the

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 free end is directed inward, while the thumb laps over the grasped end, when the strokes are directed downward and inward, the striking-point being the extreme tip of the free end. A similar specimen is illustrated in plate XLII. It is of tough and homogeneous hornblende-granite, somewhat shorter and broader than its homologue, but of exactly the same weight; it, too, is battered at the ends, but is otherwise quite natural in form. It was collected at Rada Ballena in conjunction with the ahst illustrated in plate XXXV; and like that specimen it is soaked with blood and fat, and bore shreds of flesh when found. Both these elongate cobbles are of interest as representatives of a somewhat aberrant type; for the favorite form of hupf is shorter and thicker, as shown by the prevailing shapes, both in use and lying about the jacales—indeed, the elongate form is seldom used on the coast and never carried into the interior.

A typical hupf is illustrated in plate XLIII. The specimen is of fine-grained, dense, and massive quartzite, its homogeneity being interrupted only by a thin seam of infiltrated silica and by an obscure structure-plane brought out by weathering toward the thinner end. Its weight is 1 pound 14 ounces (0.85 kilogram). In general form and surface the specimen is an absolutely natural pebble, such as may be found in thousands along the shores of Seriland. Its artificial features are limited to slight battering about the edges, especially at the thinner end; partial polishing of the lateral edges by repeated handling (as imperfectly shown in the edge view); very perceptible polishing of both faces by use as a grinder; some fire-blackening on both sides; semisaturation with grease and blood; and the flecks of red face-paint shown in the reproduction. The specimen was obtained at Costa Rica after some days' observation of its use. The chief observed functions of this implement were as follows: (1) Skinning the leg of a partially consumed horse; this was done by means of centripetal (i. e., downward and inward) blows, so directed that the thinner end fell obliquely on the tissue, bruising and tearing it with considerable rapidity. (2) Severing tough tendons already sawed nearly through by rubbing over the edge of an ahst, the hupf in this case being in the hands of a coadjutor and used in rather random strokes whenever the tissue seemed particularly refractory. (3) Knocking off the parboiled hoof of a horse to give access to the coffinbone. (4) Crushing and splintering bones to facilitate sucking of the marrow. (5) Grinding mesquite beans; the process being begun by vertical blows with the end of the implement on a heap of the pods resting on an ahst, continued by blows with the side, and finished by kneading and rubbing motions similar to those of grinding on a metate. (6) Pounding shelled corn mixed with slack lime, in a ludicrously futile attempt to imitate Mexican cookery. (7) Chopping trees; in this case the implement was grasped in the centripetal manner and used in pounding and bruising the wood at the point of greatest bending under the pull of a coadjutor. (8) Cleaving and

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LONG-USED METATE (REDUCED). TOP

(p. 238 A)

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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LONG-USED METATE (REDUCED), BOTTOM

[p. 238 B]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

breaking wood for fuel. (9) Dethorning okatilla stems, by sweeping centripetal strokes delivered adzwise from top toward butt of a bunch of stems lying on the ground. (10) Severing a stout hair cord; in this use it was grasped between the knees of a matron squatting on the ground, while the cord was held in both hands and sawed to and fro over the use-roughened thinner end. (11) Supporting a kettle (shown in plate X) as one of the fire-stones used in frontier mimicry of the Papago custom. (12) Triturating face-paint by pounding and kneading; in one case the specimen served as a hand implement, while in another case it took the place of the ahst, the ocher lump itself being struck and rubbed against it. (13) Beating a troop of dogs from a pile of bedding in a jacal; in this use the implement was held in the customary manner and used in swift centripetal blows, the matron relying on her own swiftness and reach and not at all on projection to come within reach of her moving targets; the blows usually landed well astern, and were so vicious and vigorous as to have killed the agile brutes had they chanced to fall squarely—indeed, one blow temporarily paralyzed a large cur, which escaped only by running on its fore feet and dragging its hind quarters. In most of these uses the specimen was employed in conjunction with an improvised ahst in the form of a stone carried from the rancho. Several of the processes, notably those of tissue-tearing and dog-beating, were executed with a vigor and swiftness quite distinct from the sluggish lounging of the ordinary daytide and, indeed, partaking of the fierce exaltation normal to the Seri chase. When not in use the implement usually lay just within the open end of the owner's jacal, though it was often displaced and sometimes kicked about the patio for hours. It was one of perhaps a dozen similar implements brought across the desert from the coast by as many matrons. All were regarded as personal belongings pertaining to the custodians about as definitely as articles of apparel, though rather freely loaned, especially in the owner's clan. The specimen was purchased from the possessor, who parted from it rather reluctantly, though with the tacit approval of her clanswomen, at a rate implying considerable appreciation of real or supposed value. Three or four other matrons declined to barter their hupfs, either arbitrarily or on the plea that they were a long way from the source of supply.

A common variety of hupf is illustrated in plate XLIV. It is of pinkish, slaty tuff of rather low specific gravity, somewhat vesicular and pulverulent, though moderately hard and tough. It weighs 17 ounces (0.48 kilogram). In form and surface it is essentially a wave-worn pebble, doubtless derived originally from the volcanic deposits of Sierra Kunkaak. Its artificial markings are limited to slight battering about the edges, especially at the thinner end (as shown in the edge view); slight rubbing, striation, and semipolishing of the smoother face (shown in the plate); a few grease spots and a stain showing use in crushing sappy vegetal matter, also on this face; and an inconspicuous

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 fire-mark on the obverse. It was found in a recently abandoned jacal near Campo Navidad. It is one of the three tuff specimens among those collected, one of a dozen or two seen; perhaps 10 per cent of the implements observed in Seriland are of this material, and it is significant that this ratio is several times larger than the proportion of tuff pebbles to the entire paving of the beaches, so that the material seems to be a preferred one. The preference was indeed discovered at Costa Rica in 1894, where two or three of the more highly prized hupis were of this material, and where vague intimations were obtained that it is especially favored for meal-making, doubtless by reason of the association of color and texture—associations that mean much to the primitive mind, perhaps in suggesting that the grinding is easier when done by a soft implement. An economic reason for the preference is easily found in the lower specific gravity, and hence the greater portability of a hupf of ordinary size, of this material; but there is nothing to indicate that this economic factor is weighed or even appreciated by the Seri.

A typical pebble bearing slight marks of use is illustrated in plate XLV. It is of fine grained pinkish sandstone, probably tuffaceous, and is fairly hard and quite tough; it weighs 1 pound 9 ounces (0.71 kilogram). It is wholly natural in form and surface save for slight battering or pecking on the face illustrated, and for a few stains of grease and abundant marks of fire. It was found in a fire still burning (and abandoned within a half-hour, as indicated by other signs) two or three miles inland from Punta Granita on the Seri trail toward Aguaje Parilla, whither it had evidently been carried from the coast.

A fairly common material for both hupis and ahsts is highly vesicular basalt grading into pumice stone, the material corresponding fairly with a favorite metate material among the Mexicans. The rock was not certainly traced to its source, but seems to come from the northern part of Sierra Kunkaak. A typical hupf of this material is shown in plate XLVI; it weighs 1 pound 13 ounces (0.82 kilogram). It is wholly natural in every respect save for slight grinding and subpolishing, with some filling of interstices, on both faces. From the slight wear of this specimen, together with the absence of battering, and from similar features presented by others of the class, it may be inferred that implements of this material are habitually used only for grinding—for which purpose they are admirably adapted. The specimen emphasizes the importance of the hupf in Seri thought, for it was one of a small series of mortuary sacrifices from a tomb at Pozo Escalante (ante, p. 290).

Throughout the surveys of Seriland, constant search was made for cutting implements of stone; and the nearest approach to success was exemplified by the specimen illustrated in plate XLVII. It is of bluish-gray volcanic rock (not specifically identified) of close texture and decided toughness and hardness; it weighs 10 ounces (0.28 kilogram). In greater part its form and surface are natural, but a projecting por-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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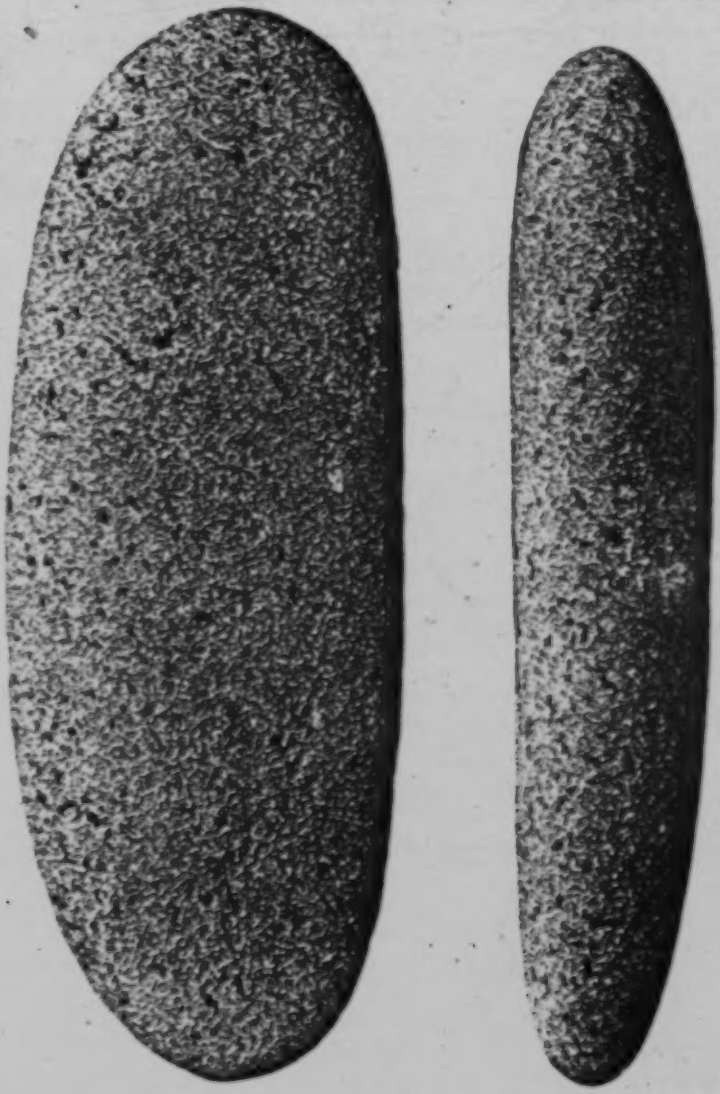

NATURAL PEBBLE BEARING SLIGHT MARKS OF USE

[p. 240A]

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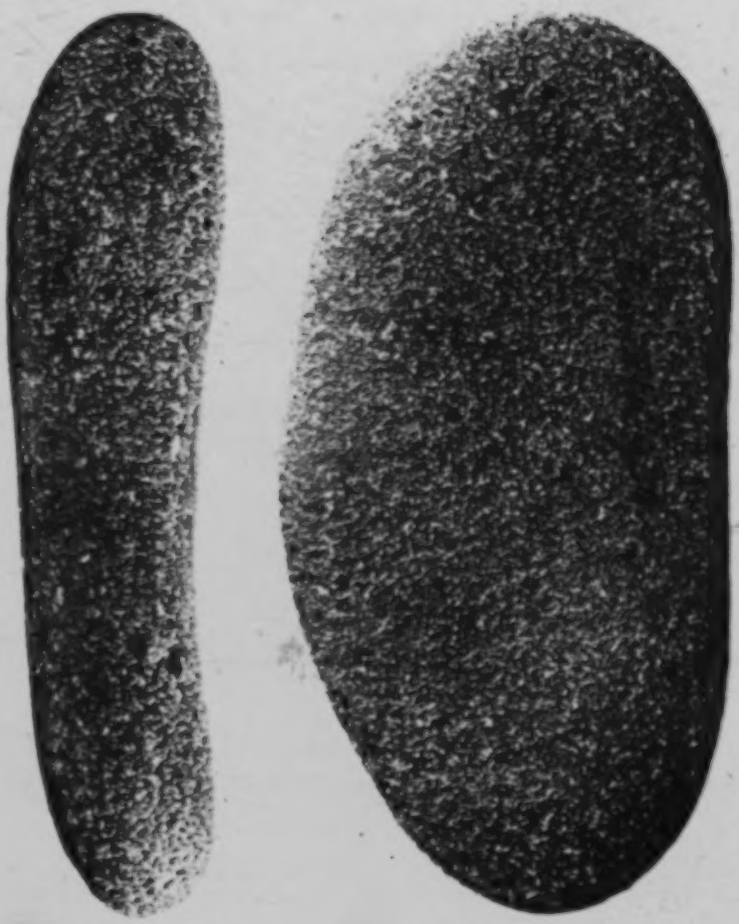

NATURAL PEBBLE USED AS BONE-CRUSHER

[p 240 B]

1:McCee E-5 (1894-1895)1896 NU31 Serial NU31

tion brought out by weathering on one side is split off, presumably by intention, and the fractured surface thus produced is partly smoothed by rubbing, probably in use, though possibly by design. The edges are more or less battered, especially at the ends, and several rude flakes have been knocked off, evidently at random and presumably in ordinary use as an adz. The smoother face is wholly natural. The specimen was picked up in a jacal at Rada Ballena, but bore no marks of recent use. 412

A tuff implement of suggestively ax-like form is shown in plate XLVIII; it is firmer and less pulverulent but more vesicular than most implements of its class; it weighs but 7 ounces (0.20 kilogram). The specimen was picked up in a ruinous jacal, which had evidently been occupied temporarily within a fortnight, on the summit of the great shell-mound forming Punta Antigualla. The somewhat indefinite texture and color render it difficult to distinguish between natural and artificial features; but careful examination indicates that it is wholly natural in form and in nine-tenths of the surface, and that the ax-like shape expresses nothing more than accidents of structure and wave-work. This interpretation is practically established by the slight battering along the edges and about the smaller end, as illustrated in the edge view; for this wear of use, which has produced a distinctive surface, is practically absent from the notches which give the ax-like effect. Besides the battering, the only artificial marks are ancient fire-stains on one of the faces. On the whole it is clear that the artificial appearance catching the eye at first glance is purely fortuitous, and that the specimen is but a natural pebble very slightly modified by ordinary use.

A suggestive specimen is illustrated in plate XLIX; it is of purplish-gray granitoid rock, of decided toughness and considerable hardness, and weighs 12¼ ounces (0.35 kilogram). The surface and general form indicate that it is a natural pebble entirely without marks of artificial use; but the regular curvature of the principal face (the shape is that of a segment of a cylinder rounded toward the ends) suggests artificial shaping, while it was found far in the interior, near Barranca Salina, whither it must have been carried from the coast. It may possibly be a fragment of a pestle subsequently wave-worn; but all the probabilities are that it is wholly natural, and that its suggestive features are fortuitous.

The constant search for chipped or flaked tools which was extended over nearly all Seriland seldom met the slightest reward; but the specimen shown in plate L was deemed of some interest in connection with the search. It is of hard and tough greenstone, showing obscure and irregular structure lines, though nearly homogeneous in texture; it weighs 10 ounces (0.28 kilogram). It is primarily a natural pebble with form and surface reflecting structure and texture in connection with wave-action. Its artificial features are limited to the usual slight battering of the smaller end, still less conspicuous battering or grind-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 ing of the margin about the larger end, slight but suggestive chipping of the thinner edge, inconspicuous hand-wear and polish on the principal face, and a few obscure scratches or striæ on the same face, as illustrated in the plate. The position and character of the flake-fractures, which are fairly shown in the edge view, indicate that they were made while the pebble was in use as a bruising or cutting tool, a use at once suggested to the Caucasian mind by the form of the pebble; yet it is noteworthy that its thin edge displays less battering than either end of the object and no more than the opposite and thicker edge, while it is still more significant that the specimen was apparently discarded immediately on the modification of form by the spalling—a modification greatly increasing its efficiency, as all habitual users of chipped stone tools would realize. The specimen is one of a large number of examples showing that whenever a hupf is broken in use it is regarded as ruined, and is immediately thrown away. This particular specimen is archaic; it was found in the cliff-face of the great shell-heap at Punta Antigualla, embedded in a tiny stratum of ashes and charcoal (some of which still adheres, as shown in the black flecking at the outer end of the striæ), associated with scorched clam-shells, typical Seri potsherds, etc, some 40 feet beneath the surface.

While the great majority of the hupfs are mere pebbles bearing slight trace of artificial wear, as illustrated by the foregoing examples, others bear traces of use so extended as to more or less completely artificialize the surface. A typical long-used hupf is depicted in plates LI and LII. It is a tough and hard quartzite, dark gray or brown in color, massive and homogeneous in texture; it weighs 2 pounds 4 ounces (1.02 kilograms). In general form it is a typical wave-worn pebble of its material, and might be duplicated in thousands along the shores of Bahia Kunkaak and El Infiernillo; but fully a third of its surface has been more or less modified by use. The flatter face (plate LI) is smeared with blood, grease, and charcoal, which have been ground into the stone by friction of the hand of the user in such manner as to form a kind of skin or veneer; portions of the face bear a rubpolish, due probably to the hand-rubbing in use; near the center there is a rough pit about an eighth of an inch (3 mm.) deep, evidently produced by pecking or battering with metal, while three or four neighboring scratches penetrating the veneer appear to record ill-directed strokes of a rather sharp metal point. In the light of observed customs it may be inferred that this pitting was produced by use of the implement as an anvil or abat in sharpening a harpoon-point and fitting it into its foreshaft. The thinner edge (shown in plate LI; that toward the right in the face view on the same plate) displays considerable battering of the kind characteristic of Seri hupfs in general; it is smoked and fire-stained, as shown, while the lower rounded corner is worn away by battering to a depth of probably one-fourth inch (5 mm.). The obverse face reveals more clearly the battering about both corners and edges,

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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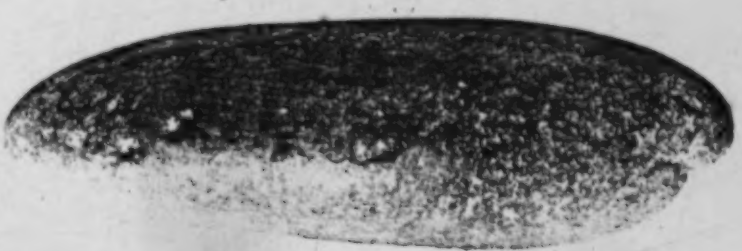
LITTLE-WORN PEBBLE USED FOR ALL DOMESTIC PURPOSES



(p. 242 A)

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McGee E-5 (1894-1895)1898 NU31 Seri NU31

NATURAL PEBBLE USED AS CRUSHER AND GRINDER

Cp.242 BJ

I: McGee Σ-S (1894-1895)1898 NU31 Sect NU31

including the dislodgment of a flake toward the narrower end; but its most conspicuous feature is a broad subpolished facet (rounding slightly toward the thinner edge) produced by grinding on a flat surface abet. This face, too, exhibits fire-staining, while the surface beyond the facet—and to a slight extent the facet itself—is veneered like the other face. There are a few scratches on this side also, as well as a slight pitting due to contact with metal. The thicker edge (plate LII) displays considerable battering, especially a recent pitting near the middle evidently due to use as an anvil held between the knees for sharpening a harpoon point by rude hammering. The specimen was one of a score of implements lying about the interior of the principal jacal in the great rancheria at the base of Punta Tormenta (illustrated in plate VII).

A related specimen, though of somewhat aberrant form, is illustrated in plate LIII. It is of peculiarly tough and quite hard greenstone and weighs 2 pounds 1 ounce (0.93 kilogram). Somewhat less than half of the surface is that of a wave-worn pebble; the remainder is either battered out of all semblance to wave-work, or thumb-worn by long-continued use. The object well illustrates the choice of the most prominently projecting portion of the hand-implement as the point of percussion, and consequently the concentrated wear on such portions whereby the object is gradually reduced to better-rounded and more symmetric form. This specimen displays some minor flaking, apparently connected with the battering and regarded by the user as subordinate to the general wear. It was found at Punta Tormenta, concealed in the wall of a jacal, as if preserved for special use.

One of the best-known examples of a use-perfected hupf is illustrated in plate LIV. It is of coarse-grained but massive and homogeneous granite, similar to that forming Punta Blanca, Punta Granita, and, indeed, much of the eastern coast of Bahia Kunkaak. It weighs 1 pound 10 ounces (0.74 kilogram). In general form it is just such a pebble as is produced from this material by wave-wear, and might be duplicated along the shores in numbers. The artificial surfaces comprise (1) both ends, which are battered in the usual manner; (2) both lateral edges, of which one is slightly battered and worn, while the other is somewhat battered and also notched, evidently by a chance blow and the dislodgment of a flake; (3) both faces, which are flattened by grinding, while one of them (that shown in the plate) is slightly pitted, evidently by metal-working; so that the natural surface is restricted to small areas about the corners. The implement was found at the camp site on Punta Miguel, already noted (page 189), whence a group of five Seri were frightened by the approach of the 1895 expedition; it was covered with blood and shreds of turtle flesh, and is still saturated with grease. Moreover, it is quite confidently identified (not only by form and material, but especially by the fortuitous notch) as a hupf seen repeatedly at Costa Rica in 1894; it was the property of a matron of the Pelican clan (whose portrait appears in plate XXII),

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 who was observed to use it for various industrial purposes, and who refused to part with it for any consideration.

A still more beautiful example of Seri stone art is depicted in plate LV. It is of the same homogeneous and coarse-grained granite as the last specimen, and closely approaches it in dimensions; it is slightly longer and broader, but somewhat thinner, and weighs 1 pound 11 ounces (0.77 kilogram); and, except for the absence of the accidental notch, its artificial features are still more closely similar. The ends are slightly battered, as illustrated in the end view at the right of the plate; the edges are similarly worn, but to a less extent; while both sides have been symmetrically faceted by use in grinding, the facets being straight in the longitudinal direction but slightly curved in the transverse direction, in the shape of the Mexican mano. The specimen displays well-marked color distinctions between the artificially worn and the natural surfaces, the former being gray and the latter weathered to yellowish or pinkish-brown; these colors show that something like two-thirds of the surface is artificial and the intervening third natural; and the natural portion corresponds in every respect, not only in form but in condition of surface, with the granite cobbles of Sorilaud's stormy shores. Unfortunately the color distinctions, with the limits of facetting and other artificial modifications, are obscure in the photomechanical reproduction; they are indicated more clearly in the outline drawing overshoot. The specimen is partially saturated with fat, and bears an ocher stain attesting use in the preparation of face-paint. It was found carefully wrapped in a parcel with the shell paint-cup illustrated in plate XXVII, a curlew mandible, two or three hawk feathers, and a tuft of pelican down (the whole evidently forming the fetish or medicine-bag of a shamanistic siderwoman), in an out-of-the-way nook in the wall of an abandoned jacal at Punta Narragansett.

A somewhat asymmetric though otherwise typical hupf is illustrated in natural colors in plate LVI. It is of andesite, and may have come originally either from the extensive volcanics of southern Sierra Seri or central Sierra Kaukaak; it weighs 1 pound 15 ounces (0.88 kilogram). The general form is that of a wave-worn cobble, and fully one-third of the surface retains the natural character save for slight smoothing through hand friction in use. The chief artificial modification is the facetting of both sides in nearly plain and approximately parallel faces, the maximum thickness of material removed from each side, estimated from the curvature of the adjacent natural surface, being perhaps three-sixteenths of an inch (5 millimeters); in addition, both ends are battered in the usual fashion, while the thinner and more projecting edge is battered still more extensively, in a way at once subserving convenient use and tending to increase the symmetry of form. One of the facets is quite smooth; the other (that on the right in the plate) is slightly pitted, as if by use in metal-working. The specimen is somewhat greasy—the normal condition of the hupf—and bears

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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NATURAL PEBBLE SLIGHTLY USED AS HAMMER AND ANVIL

[p. 244 A]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

conspicuous records of its latest uses; both faces (more especially the pitted one) are stained with sap from green vegetal substance (probably immature mesquite pods), while one face is brilliantly marked with ocher in such manner as to indicate that a lump of face-paint was partially pulverized by grinding on the slightly rough surface. It was found, together with the ahst illustrated in plate XXXVIII, in the rear of a recently occupied jacal midway between Punta Antigualla and Punta Ygnacio, cached beneath a thorny cholla cactus uprooted and dragged thither for the purpose. The trail and other signs indicated that the jacal had been occupied for a few days and up to within twenty-four hours by a family group of six or seven persons; that it was vacated suddenly at or about the time of arrival of the party of five whose trail was followed by the 1895 expedition from Punta Antigualla to Punta Miguel (where they were interrupted in the midst of a meal and frightened to Tiburon); and that the larger party fled toward the rocky fastnesses of southern Sierra Seri.

412

Of the foregoing hupfs several are aberrant, and serve merely to illustrate the prevailing directions of departure from the optimum form and size of implements. Six of the specimens may be deemed typical; they are as follows:

Plate No.	Locality	Material	Weight	Condition
			Lb. Oz.	
XLIII.....	Costa Rica	Quartzite .	1 14 (0.85 kg.).	Nearly natural.
XLIV	Campo Navidad	Tuff.....	1 1 (.48 kg.)	Four-fifths natural.
XLVI	Pozo Escalante.....	Vesicular lava.	1 13 (.82 kg.) ..	Nearly natural.
LIV	Punta Miguel	Granite ...	1 10 (.74 kg.) ..	One-fifth natural.
LV	Punta Narragansett	....do	1 11 (.77 kg.) ..	One-fourth natural.
LVI	South point Sierra Seri.	Andesite ..	1 15 (.88 kg.) ..	One-third natural.

From these specimens a type of Seri hand implement may easily be formulated: it is a wave-worn pebble or cobble of (1) granite, quartzite, or other tough and hard rock, (2) tuff, or other light and pulverulent rock, or (3) vesicular lava; it is of flattened ovoid form, or of biscuit shape; it weighs a trifle under 2 pounds (about 0.85 kilogram); originally the form and surface are wholly natural, but through the chance of use it is modified (*a*) by a battering of the ends and more projecting edges, and (*b*) by grinding and consequent truncation of the sides; though initially a natural pebble, chosen nearly at random from the beach, it eventually becomes personal property, acquires fetishistic import, and is buried with the owner at her death.

[422]
[764]

The ahsts and the heavier cobbles used alternatively as ahsts and hupfs are too fortuitous for reduction to type; while the protean peb-

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412 bles utilized in emergency, and commonly discarded after a single use, are too numerous and too various for convenient or useful grouping.

411 There is a distinctive type of Seri stone artifacts represented by a single category of objects, viz, chipped arrowpoints. Several of the literary descriptions of the folk—particularly those based on second-
[114] hand information and far-traveled rumor—credit the Seri with habitual use of stone-tipped arrows,[1] and it is the current fashion among both Mexican and Indian residents of Sonora to ascribe to the Seri any shapely arrowpoint picked up from plain or valley; yet the observations among the tribesmen and in their haunts disclose but slight basis for classing the Seri with the aboriginal arrow-makers of America.

Among the 60 Seri (including 17 or 18 warriors) at Costa Rica in 1894, three bows and four quivers of arrows were observed, besides a number of stray arrows, chiefly in the hands of striplings. The arrows seen numbered some 60 or 70, including perhaps 20 "poisoned" specimens; nearly half of them were tipped with hoop-iron, as illustrated in plate XXX, while about as many more were fitted only with the customary foreshafts (usually sharpened and hardened by charring), and the small remainder had evidently lost iron tips in use; there was not a single stone-tipped arrow in the rancheria. Moreover, when the usually incisive and confident Mashém was asked for the Seri term for stone arrow-point he was taken aback, and was unable to answer until after lengthy conference with other members of the tribe—his manner and that of his mates clearly indicating ignorance of such a term rather than the desire to conceal information so frequently manifested in connection with esoteric matters; and the term finally obtained (*ahst-ákk*, connoting stone and arrow) is the same as that used to denote the arrowpoint of hoop-iron. The most reasonable inference from the various facts is that whatsoever might have been the customs of their ancestors, the modern Seri are not accustomed to stone arrow-making.

FIG. 37—Seri arrowpoints.

172 The 1895 expedition was slightly more successful in the search for
411 Seri arrows. About midway between the abandoned Rancho Libertad and Barranca Salina, an ancient Seri site was found to yield hundreds of typical potsherds, half a dozen shells such as those used for utensils, the fragments of a hupf evidently shattered by use as a fire-stone, and the small rudely chipped arrowpoint shown in figure 37*a*; and among the numerous relics found on a knoll overlooking Pozo Escalante (including two jacal frames, two or three graves, an abst, several shells

[1] The most specific reference is that of Hardy: "The men use bows and stone-pointed arrows; but whether they are poisoned, I do not know." Travels, p. 290.

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NATURAL PEBBLE SLIGHTLY USED AS GRINDER

THE HOLLISTON PRINTING CO., BOSTON

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

(p. 246 A)

1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

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NATURAL PEBBLE SLIGHTLY USED AS DOMESTIC IMPLEMENT

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

177 502 brought in a cargo of large wire, and a piece of door-frame with heavy strap-iron hinges attached with screws, were among the troves of the tribesmen within a few weeks; and it was noted that while even the hinge screws and the tacks attaching tags to the cask-heads had been extracted by breaking up the wood, the roughly forged hinges of 2 by ¾-inch wrought iron had been abandoned after a tentative battering with cobbles, and lay among the refuse stones about the jacales.

412 A rough census of the stone implements of Seriland is not without interest, even though it be no more than an approximation. Some 30 or 35 habitable and recently inhabited jacales were visited, with about twice as many more in various stages of ruin, fully two-thirds of these being on the island; and at least an equal number of camps or other homeless sites were noted. About these 150 jacales and sites there were, say, 50 ahats, ranging from nearly natural bowlders to the comparatively well-wrought specimen illustrated in plate XXXIX, and an equal number of cobbles used interchangeably as ahats and hupfs; there were also 200 or 300 pebbles bearing traces of use as hupfs, of which about a third were worn so decidedly as to attest repeated if not regular use; while no flaked or spalled implements were observed save the two doubtful examples illustrated in plates XLVII and L, and only two chipped arrowpoints. It may be assumed that the sites visited and the artifacts observed comprise from a tenth to a fifth of those of all Seriland, in addition to, say, 75 finished hupfs habitually carried by Seri matrons in their wanderings; and it may be assumed also that 50 or 100 metallic harpoon-points and several hundred hoop-iron arrowpoints are habitually carried by the warriors and their spouses.

[324] The most impressive fact brought out by this census is the practical absence of stone artifacts wrought by flaking or chipping in accordance with preconceived design; excepting the exceedingly rare arrowpoints there are none of these. And the assemblage of wrought stones demonstrates not merely that the Seri are practically without flaked or chipped implements, but that they eschew and discard stones edged by fracture whether naturally or through accident of use.

Summarily, the Seri artifacts of inorganic material fall into three groups, viz: (I) The large and characteristic one comprising regularly-used hupfs and ahats, with their little-used and discarded representatives; (II) the small and aberrant group represented by chipped arrowpoints, and (III) the considerable group comprising the cold-wrought metal points for arrows and harpoons and awls—though it is to be remembered that the Seri themselves combine the second and third of these groups.

I. On reviewing the artifacts of the larger group it becomes clear (1) that they immediately reflect environment, in that they are characteristic natural objects of the territory; (2) that they come into use as implements through chance demands met by hasty selection from the

1: McGee E-5 (1894-1895)1898 NU31 Ser1 NU31

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NATURAL PEBBLE SLIGHTLY WORN BY USE

THE HOLLISTER PRINTING CO., BOSTON

[p.248 A]

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1: McGee E-5 (1894-1895)1898 NU31 Serl NU31

[p. 248 B]

NATURAL PEBBLE CONSIDERABLY WORN IN USE AS GRINDER

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

abundant material; (3) that the great majority of the objects so employed are discarded after a use or two; (4) that when the object proves especially serviceable, and other conditions favor, it is retained to meet later needs; (5) that the retained objects are gradually modified in form and surface by repeated use; (6) that if the modification diminishes the serviceability of the object in the notion of the user (e. g., by such fracture as to produce sharp edges), it is discarded; (7) that if the modification enhances the serviceability of the specimen in the mind of the user it is the more sedulously preserved; and (8) that through the instinctive desire for perseveration, coupled with the thaumaturgic cast of primitive thinking, the object acquires at once an artificialized form and a fetichistic as well as a utilitarian function. The significant feature of the development is the total absence of foresight or design, save in so far as the concepts are fiducial rather than technical or directly industrial.

II. On reviewing the almost insignificantly small group of chipped stone artifacts, it seems clear that while the material is local the design is so incongruous with custom and characteristic thought as to raise the presumption that stone-chipping is an alien and imperfectly assimilated craft. The conspicuous and significant feature of the chipped stone artifact is the shapement in accordance with preconceived design.

III. On reviewing the arbitrarily separated group of metallic artifacts it is found clear (1) that the material is foreign; (2) that it is avidly sought and sedulously saved and utilized; (3) that it is wrought only by the crude methods used for fashioning the most primitive of implements and tools; and (4) that it is used chiefly as a substitute for organic substances employed in symbolic imitation of the natural organs and functions of animals. The significant features of the use of iron artifacts are (*a*) the absence of either alien or specialized designs, and (*b*) the mimicry of bestial characters as conceived in primitive philosophy.

Classed by material and motive jointly, the three groups are diverse in important respects: The first is local in material, local in motive; the second is local in material, foreign in design; the third is foreign in material, local in motive.

On recapitulating the several phases of Seri handicraft, the devices are found to fall into genetic classes of such sort as to illumine certain notable stages of primitive technic.

The initial class comprises teeth, beaks and mandibles, claws, hoofs, and horns, used in imitation or symbolic mimicry of either actual or imputed function of animals, chiefly those to which the organs pertain, together with vegetal spines and stalks or splints, used similarly under the zootheistic imputation of animal powers to plants; also carapaces and pelts, used as shields combining actual and symbolic protective functions. While this class of devices is well displayed by the Seri, it is by no means peculiar to them; clear vestiges of the devices have

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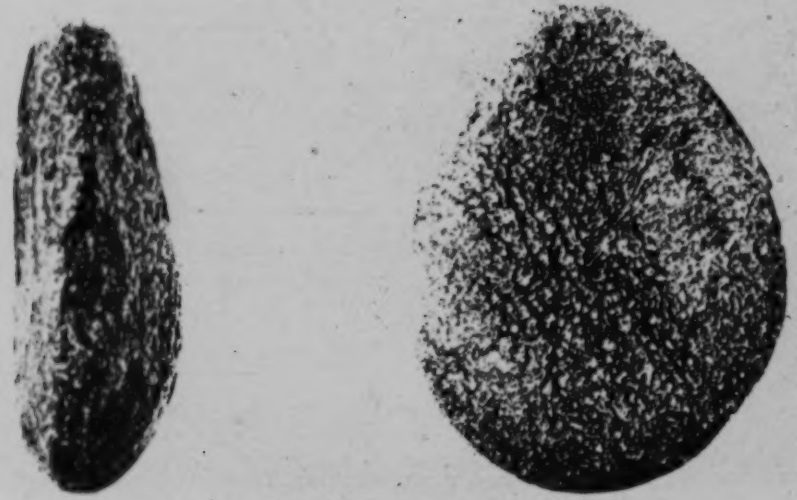

NATURAL PEBBLE CONSIDERABLY WORN AS CUTTER AND GRINDER

[FACING P. 251]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

412

NATURAL PEBBLE CONSIDERABLY USED AS HAMMER, GRINDER, AND ANVIL (TOP AND EDGE)

THE HELIOTYPE PRINTING CO., BOSTON

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

[Facing p. 252]

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

NATURAL PEBBLE CONSIDERABLY USED AS HAMMER, GRINDER, AND ANVIL (BOTTOM AND EDGE)

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1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

Cp.2548

HAMMER AND GRINDER

THE HELIOTYPE PRINTING CO., BOSTON

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

IMPLEMENT SHAPED BY USE

THE HELIOTYPE PRINTING CO., BOSTON

1: McGee E-5 (1894-1895)1898 NU31 Seri NU31

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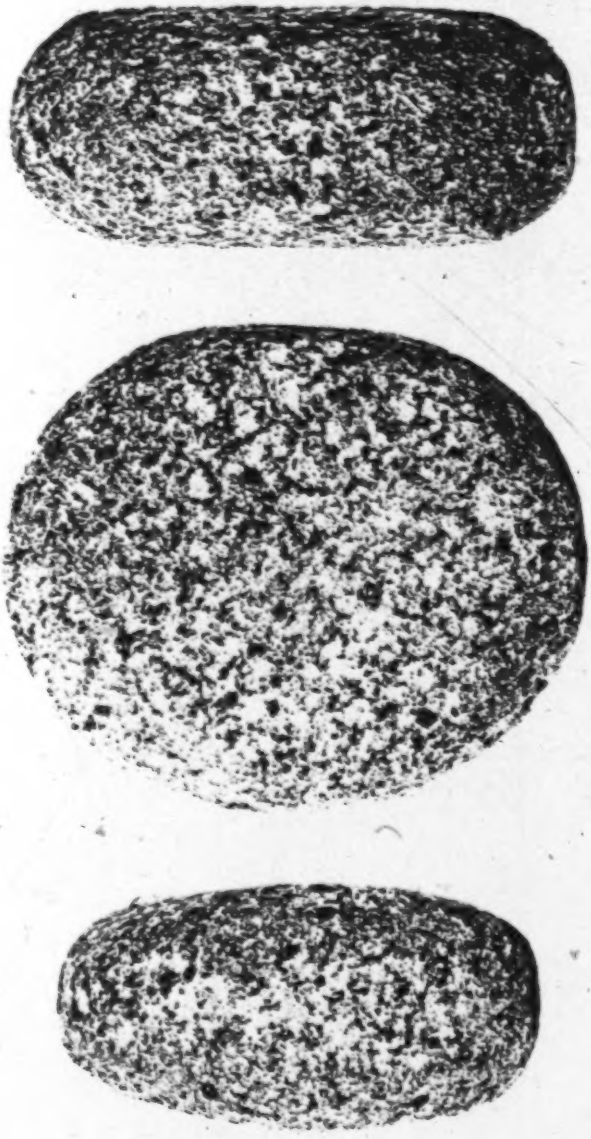

IMPLEMENT PERFECTED BY USE

THE NEW ERA PRINTING CO., BOSTON

THE BUREAU OF AMERICAN ETHNOLOGY

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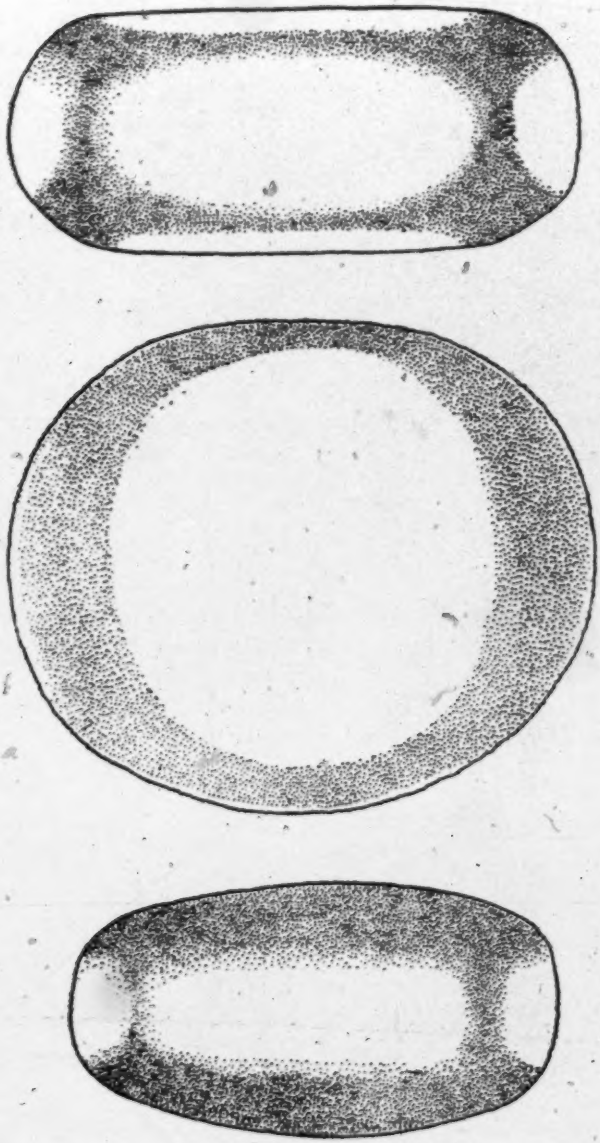
● 412



[p. 256 B]

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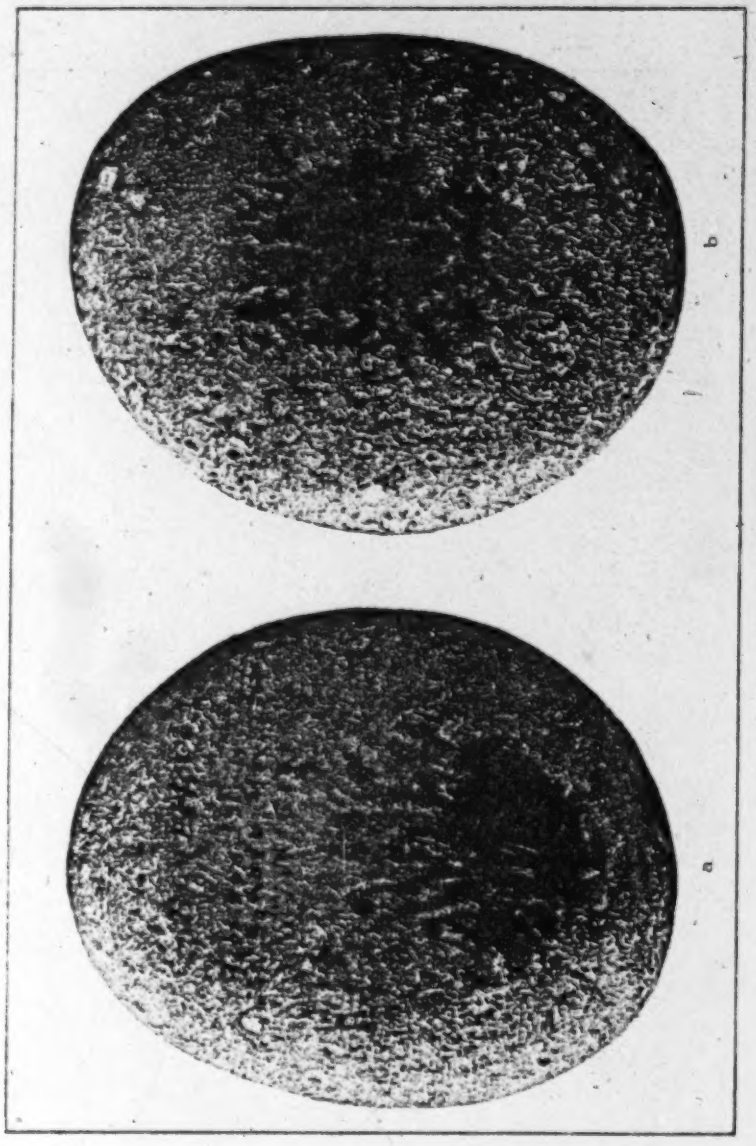

PERFECTED IMPLEMENT FOUND IN USE

[FACING P. 259]

773 Before this it was day all the time, but then it became night and coyote only laughs at night. The black strings still hang about badger's neck."

It is strange to find, too, that a flood legend is traditional among the Seris. Chico said: "In the times of the ancients a great flood came, the ocean rose up and all the country of the Seris was under water except the top of Cerro Alto. There a few Seris gathered and were saved. Everyone else was drowned. To this day the top of Cerro Alto is covered with brush which the flood did not submerge. All Seri children are taught this flood tradition, and they must learn it by heart so as to teach their children and their grandchildren."

764 The death of a tribesman gives no cause for ceremony among the Seris, although the [765] nearest relatives may customarily wail, sometimes for months, morning and evening. The disposal of the bodies of the dead, is, however, of considerable interest. A hole about three feet deep is dug by means of large [412] clam shells and a cave is excavated for the head such that the earth will not touch it. The deceased Indian is wrapped in his own blanket and laid in the grave with the head to the East, face up. The body is covered and the grave is partly filled with earth, then covered with a layer of the spiniest of chollas and thorny brush, further filled, leveled and covered with another layer of chollas to discourage the coyotes from digging up the body. When the Seris are on the move, how- [766] ever, and grave-digging is too great a task, a body may simply be lifted high to the fork of a giant cactus and left there.

583 Marriage among the Seris is not so much 585 a ceremony as it is the completion of a bargain. Under ordinary circumstances, when a man buys a woman he strikes a bargain with the bride's parents and makes a down payment. Only after completion of the bargain does the woman go to live with the man, but even then payments do not cease but continue intermittently through life. Chico Romero, although "married" for fifteen years, gave his wife's father some paint that he had received in payment for guiding and 425 packing. It is also considered natural to 858 buy and sell children. One Seri, Santo

[p. 266 (B)]
[Text continues on p. 267 (B)]

5:Dawson N-5 (1940) 1944 NU31 Seri NU31

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Preparing a mesquite bean meal cake on the stone metate.

Seri women carrying firewood back to camp. Note the baskets and the head pads made of mesquite or torote.

8: Ascher E-5 (1960) 1962 NU31 Seri NU31

for the point may come from the transmission of an abandoned car or from flotsam. The wood for the hafting can be mesquite or ironwood, both indigenous in the area; waste from boat construction or other scraps of wood may also be used. Rubber for the gasket may be obtained from a worn automobile tire. The wrapping cord and lead cord are store bought, and mesquite gum is used to seal the hafting.

In manufacturing foreshafts Seri fishermen use three tools: a knife, a hacksaw blade, and a triangular file. The hacksaw blade is used to cut an appropriate length of metal for the point and to rough out the barb; the triangular file is employed to finish the point barb and stem; the tang of the file is used to puncture the hole in the gasket which is to receive the point. The shaping of the hafting and gasket, and the cutting and wrapping of the lead cords, are accomplished with a knife.

With regard to the method of manufacture, all fishermen report essentially the same procedure. They describe the pattern as a series of steps under two headings: (1) shaping and (2) assembling. Two individuals did not mention steps 1c and 2b, and the others considered these two steps to be optional.

1) Shaping
   a) Shaping the metal into a point
   b) Shaping the wood for hafting the point
      α) Shaping the general form
      β) Splitting the form lengthwise and grooving each half to receive the point (see section in Figure 1)
   c) Shaping the rubber for the gasket

2) Assembling
   a) Placing the mesquite gum in the grooved portions of each half of the hafting (see section in Figure 1)
   b) Placing the gasket on the point
   c) Inserting the point base into the hafting and reuniting the split hafting form
   d) Wrapping with the wrapping cord and with it interweaving the lead cord
   e) Refinishing the hafting base to fit the mainshaft socket

Four men were able to explain the foregoing procedure in detail and were in agreement in the following matters. The point is shaped before the hafting because its length determines the length of the latter, and because the diameter of the point base dictates the grooving of the haft. The gasket is shaped after the point and the hafting because the diameter of its hole is determined by that of the point base and its total diameter by that of the hafting. The mesquite gum then secures the point and seals the hafting. Interweaving the lead cord with the wrapping cord secures the former to the hafting.

The amount of time required to complete a foreshaft shows marked variation. This is not primarily a function of the working habits of the artisan. If all the materials are present, the time it takes to make a foreshaft ranges from four to eight hours, but if all the materials are not available, as much as a year may be required. There may, for example, be a considerable lapse of time between the shaping of a point and the shaping of a gasket when material for the

462 desert plants or littoral fishlets from tide-pools or of the shellfish. Both men and women will [224] bring in an occasional rattler, although women [857] are more likely to do this because they spend more time in the desert. Children of both sexes are [883] engaged in the female occupations here, but adolescent boys already join in their fathers' hunts on land or sea.

342 Housing has undergone some changes. In the 184 desert or on Tiburon the Indians construct the kind of shelter they did in the recorded past, an ocotillo frame, bent over in the middle and covered up with dried plant debris and twigs from the desert, or with the sail cloth. But in Desemboque they have more substantial houses—of wattle and adobe, with flat roofs, rectangular or square, often with corrugated tin or drift planks and other debris piled up on top, or along the walls.

178 In the remainder of their material culture, not much has been left from years past although one must remember that from the very beginning of recorded Serian history it has been of a most [291] meager sort. Pelican robes, which some Seris ap- [412] parently still wore in 1930 are gone for good. So are the stone tools. So is the pottery which had [323] probably disappeared in Kroeber's time. The hu- [301] man hair necklace with rattlesnake rattles is also a thing of the past. The rattlesnake skin belts [291] McGee (1898:170) described and figured are probably all gone. I havn't seen or heard of any.

412 But what remains much as they had been in 285 1894 are the bone-awls. These are made of burros' carpals and the blossoming of basketry, owing to

[P. 8A]

412 the stimulus of the tourist trade, has kept this
285 tool alive. Another survival from McGee's times
301 are *Olivella* shell necklaces.

Seri Antecedants and Relationship

174 For complete lack of archaeological information, little can be deduced about Seri antecedents. Speculations can be made only on the basis of similarities of their post-historic cultures with the cultures of the surrounding tribes.

171 Individual traits between the Seri and their
174 neighbors show discordant connections. Comparative data assembled by Kroeber, Beals and Driver & Massey suggest almost equal possibilities of derivation from the Cochimí, the Gila, Pima and the Yuman tribes but favor much less connections to the south. Much is made of the basketry. Archaeological basketry has been unearthed since the [172] work of Kroeber and Beals was published (Massey, MS.), but it is different from the Serian. Seri basketry shows closest relationship to Pima-Papago complex (Malkin, MS.). But part of this may be not only post-historic but certainly very recent and is hardly an argument in favor of the Pima-Papago connections.

Kroeber (1930:5) thought that on the face of it, the Seri showed greatest affinity to the Cochimí on the grounds of their general development of economy—the hunting and gathering subsistence. But he also pointed out that relationship with the Cochimí may rest ultimately on the linguistic analysis if the Cochimí language can still be recorded—which is most dubious.

[P. 8 B]

301 + 825 worn. I have observed women wearing necklaces of the former and women and very young boys of the latter. The olive shell, incidentally, is made into two sorts, the natural, unroasted shells which retain a greenish-purple, mottled color and the white. The white pallid color is achieved by roasting the shells over fire. The necklaces are mostly made up of either colored or white but occasionally they may be made of mixed shells and then they are usually alternately interlaced, now with one, now with another.

+ 825 b) *Utensils:* Two species had been reported used as occasional drinking or dipping cups and spoons. *Lavicardium elatum* and *Ficus ventricosus*. *Ficus* is presently discarded, but the *Lavicardium* is still occasionally used so. There is no doubt that the incidental use of these shells increases during longer fishing expeditions when the Seris are apt to lose some of their gear.

[412] [415]

[436] c) *Money:* Interestingly, the brown cowry was supposed to have been used as a means of exchange, as money—in the past. If this is so, then the selection of this shell for such purpose is not surprising considering its widespread use throughout the world.

[171]

439 + 825 d) *Trade:* Altogether 12 species had been reported as traded off either in the past or present. The trade importance of various species of shells varies with the demand of the market and sometimes may be only sporadic and short-lived. Only a few of the species had been indicated as having been of any trade importance in the past, and it may well be that the Seris did not register the species which may have been briefly sold to and outsiders during the short-lived fads of demand. It may be said in general that the trade importance of the shells increases and that greater variety of them are exploited now than formerly. This is surely owing to the increasing accessibility of the Seri country and the increasing tourism, not only visitors from Hermosillo, but also from such far flung places as Tucson, Phoenix and even Los Angeles.

[177]

In some instances, the Seris had no idea what the shells were sold for. The augur shell is on and off sold to some American traders who show up in Desemboque once in a while and for whom the Seri women accumulate these shells. But what uses were made of these, the Indians surely didn't know. Neither did they know what uses were made of the *Murex* shell and the *Turbo*, both of which were periodically sold in bulk to Hermosillo. On the other hand, they had some idea what uses were made of some other shells. *Pteria* and *Atrina* contain pearls and these are much desired. Especially the pearls of *Atrina* which are sold to the Mexicans or to the visitors for 25-50 pesos each and therefore have immense value, for the local market. The *Pteria* shells are said to be used for button making, and the Seris themselves claim that they make buttons of this shell. The most important of all, however, at least at the time of my visits in 1953 and 1955, was the olive shell. It was easily the most commonly and most numerously collected shell of all that the Seris ever collected. Owing to the scarcity of it in Desembo-

[435] [237] [226]

175 if they were as hungry then as they are today, they would not stop to
648 spike a man up preparatory to serving him. Their only tools then were
266 rocks to use as hammers and hoop iron for knives, and these are in
114 universal use today.

412 There is no doubt that the men were killed, but I think these mining men purposely exaggerated their findings, if any.

648 There is no doubt that the Seris were brave fighters, treacherous
721 murderers, sparing neither men, women or children on their raids,
727 killing ruthlessly. But there is one charge which cannot be brought against them, which cannot be said of many tribes north of the border. So far as I could find out, they never tortured nor scalped.

648 The Seris never took prisoners and they never inter-married with
721 other tribes, so their strain is pure.

727 There was one exception. Sixty or seventy years ago, the Seri
563 Chief Coyote Iguana and his band of warriors held up the stage between Hermosillo and Guaymas, and killed all except a handsome Spanish girl of the better class. This girl, Coyote Iguana made his wife and by her raised a family. One granddaughter still survived in 1924, and while more attractive than the general run of Seri, her complexion was fully as dark.

The Seris, Ishmaelites among the native tribes of Mexico---the most fascinating Indians in North America!

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123 *Reception Committee, Tiburon Island - 1935*
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On the twenty-fifth of April, nineteen twenty-two, I engaged the services of Roberto Thompson, who with his father and grandfather

[text continues on p. 149]

000 wear ceremonial feathers as did our western Indians. I saw no skin or
164 cutaneous disease, or evidence of tuberculosis or of trachoma---the curse of our Indians.

142. One boy-child of five years was a handsome child---fat, round,
302 sturdy, with roving great black eyes, large thick lips, a picture of
[241] perfect health. He was almost naked. His hair was done in a pigtail
[83] with a red string braided into it. His face like all the others was dirty, but he waded into the shallow water with a short spear and I saw him catch two crabs with his little harpoon. The water did not bother his face.

415 They had no plates or eating tools, except large deep clam shells,
412 cast up by the sea, which served as cups and dippers. Their long, keen
264 belt knives were used for cutting, carving or skinning, and always the
[237] fingers for eating. They gathered in a circle around an olla of seeds of long grass growing on the sea bottom prepared by winnowing, parching and grinding, and then cooked with turtle oil. Each one dipped his or her fingers into the olla and conveyed them to the mouth without losing a drop, and licked them off with great relish.

231 The dogs eat with the family. There were six or seven half-starved
264 ones. If someone picked up a piece of turtle flipper the dog often took the first lick at it, bit off a piece or licked it before it reached the owner's mouth. The dogs were not punished. They were just slapped to keep them out of the pots.

123 We had a great time that evening in Seriland. The young man played
534 his violin. This consisted of a hollow box cut out of a *palo verde*
[824] tree, and a piece of pine about sixteen inches long; terminating in a
[283] hollow where a single peg was fitted. The one string was twisted deer
[237] sinew, and the bridge was a small round clam shell at the far end. The
[533] bow was a small bent stick and some black horsehair. On the handle was a wad of rosin fastened underneath. By fingering this string a few weak squeaky notes were made, and this was the classical music of the Seris.

Manuel Encina seized his gourd rattle and began chanting. Herrera tapped a tin can and I beat on an inverted basket and the orchestra
535 was in full-swing. A young girl, Rosa, dragged out a turtle shell and
123 standing on it began to dance. This dance consisted of stepping up and down quickly with each foot alternately, and this stamping, barefooted, emitted a hollow sound. Every once in a while I let out an
[126] Indian yell which pleased the Seris very much. For two hours they had a real swell time. We took one flashlight of the proceeding.

[342] Each family was in their hut, which afforded very slight shelter
[362] as they were only partially roofed over and the sides were broken
[354] down in places. The huts were all adjoining and each had a little
[361] campfire, which did not give much illumination, so the dancing was in semi-darkness.

[text continues on p. 163]

285 [824] I watched a woman make a basket. She used young branches from the terote tree, I think *terote blanco*. The bark was peeled and shredded into two parts, the heart taken out and kept separate. The coils of the round part were put in a pot of hot water to soften, and the edge of the basket was soaked a little in hot water. The center of the coils or woof consisted of six or eight strips of heart while the outer sap wood was woven around in regular coil-weave fashion.

[287] [412] A brad of deer shin-bone sharpened on pumice to a needle point was used as a brad. With this brad she split the fiber, held one piece in her mouth, and stripped the back down. Then she punched a hole in the bone brad, inserted the sharp end of the fiber and pulled it almost through. She then repeated the operation, adding a strip of heart once in a while. These baskets are coarse and unattractive, but they are hard and tough and stand heavy use.

323 [237] [372] Cooking vessels consist of two or three cooking ollas that nest together to facilitate transportation. These are made of coarse clay, solely for utility without regard for beauty of shape, color or design. In burning these ollas they use the shell of the sea turtle. The cells of the shell are filled with a fine oil and this burns the ollas. On most of the other places on the mainland, the Indians use cow chips, or dried droppings to fire the clay.

283 484 123 [277] We proposed to shift camp to Tinajanita, our first landing place, where Herrera was to meet us in two days with the Chief and some of his men. Since it was blowing, he said the men couldn't fish and they would be on land probably hunting, so he would be able to see them. At this time they gathered *sescal* on an island off the west coast to make the liquor they used at fiestas, weddings and other celebrations.

Herrera left at five o'clock in the morning, with a swinging gait, for the opposite side of the Island. The distance around by boat would be fifty miles, and across, only about twenty or twenty-five---a full day's trip and hard, as mountains would have to be crossed and the rocks were sharp and the way difficult.

123 We had breakfast on rice and bread. Our rations are running low and we expect to move this morning. We made arrangements about the native boat and saw Blanco trot off with two five-gallon cans for water, a distance of ten miles. We went to the camp to get a few things---an old basket, a Pelican hide and other things, and then we asked the help of everybody to get the boat down to water---the tide was very low. The one man, the women and five of us were required to drag and push the boat to water.

We waved goodbye, loaded her up and then rowed against the tide and wind for miles, and finally landed in a lovely sheltered lagoon, built our fire and had lunch. A few crabs were speared, and late in the afternoon the wind shifted. We loaded the boat again and pushed off for Tinajanita, our first landing place. After rowing, we raised

[text continues on p.174]

386 Recently I observed the manufacture of *ʔantezj kóil* in Desemboque, Sonora. Although the woman involved normally makes [123] the clay in complete privacy, she agreed to let me watch. Seven young men and two young women were near a fire outside her [984] hut as she seated herself on the ground behind a water drum. As she began to work she cautioned them not to watch.[2]

[412] She commenced by scraping several roots of *ɨkoktz* to remove any dirt and then moistened them with water. Using a mano and metate, she split the bark and removed it. The rest of the root was discarded. She then pounded the bark into a pulp, moistening it at the same time with more water (Fig. 1). This pulp was put in a cup and set to one side.[3]

Next she ground several small chunks of *ɨki kóizj* into a fine powder. Then she placed a piece of hard *mokni óoxW*, the size of a marble, on the white powder. At this point she told her daughter, one of the two young women, to bring her a clean white [984] rag and a blanket. After again warning the young people to stay away, she covered herself and her metate with the blanket, leaving only a small opening by her shoulder through which I could observe. The warning was heeded by all of the youths except the daughter who came over once to take a peek. The group remained interested, and several times someone asked, "Is it blue yet?"

Beneath the blanket, the woman ground the *mokni óoxW* into the *ɨki kóizj*, mixing the powders thoroughly. After scraping the mixture to one side of the metate, she wrapped the bark pulp in the white cloth and squeezed approximately ½ teaspoonful of liquid onto the center of the stone. Then she combined some of the powder with the liquid and ground the resultant paste for about ten minutes. As necessary, she added more powder or liquid to the mixture. Finally she daubed a streak of the clay onto the back of her hand, withdrew her hand into the sunlight, and remarked that it was beginning to turn blue. At that time it was a grayish-blue. She continued to work for several more minutes and then tested the color again. This time she seemed satisfied that it was the right shade. It was now a bright, or as she put it, a strong blue. This was the *ʔantezj kóil*, the prized blue pigment (Fig. 2).

The making of the *ʔantezj kóil* is followed immediately by the making of a second portion of clay, called *ʔaʔóoskl*, which is a lighter shade of blue. Thus its name, the root meaning of which is "drab or grayish." *ʔaʔóoskl* is considered to be inferior to the *ʔantezj kóil*. After the woman had scraped the finished *ʔantezj kóil* from the metate and mano and transferred it to a saucer, she added more ground *ɨki kóizj* to the small amount of remaining

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FIG. 1. Crushing the root bark of *zkoktz (Fransería dumosa)*, to a pulp. Note the pieces of root in the left foreground, the little pieces of *mókni óoxW* sap *(Guaiacum coulteri)* in the center foreground, and the chunks of mineral in the right foreground.

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FIG. 2. The first or brighter batch of blue pigment, *?antezj kóil*.